Daily—WEDNESDAY—Issue

American
GAS JOURNAL
Formerly American Gas Light Journal
EST. 1859

VOL. 119. No. 17.
WHOLE NO. 3489.

NEW YORK, WEDNESDAY, OCTOBER 17, 1923, ATLANTIC CITY, N. J.

Subscription $3 per year
$4 Canada $5 Foreign

Library of Con
OCT 19 192
Smithsonian D

Don't Fail to See

Lattimer-Stevens

Meter Connections
Stop Cocks
Seals

Booth No's. 169 and 179

The Lattimer-Stevens Company

Company Member American Gas Association

72 Yale Avenue

Columbus, Ohio

New England Representatives:
The Eastern Service Co.
Boston

Pacific Coast Representatives:
Will W. Barnes, Los Angeles
A. P. Bartley, San Francisco

IF IT'S DONE WITH HEAT YOU CAN DO IT BETTER WITH GAS

Koppers Coal Gas Plant at WINNIPEG

We are pleased to announce the receipt of a contract from the Winnipeg Electric Railway Company covering the design and erection of a Koppers Coal Gas Plant to consist of 17 gas ovens of Koppers Improved (Becker) Type, having a capacity of 6.8 tons of coal per charge, together with a Koppers producer and coal and coke handling equipment.

This plant will embody the latest developments in coal gas manufacture. The ovens will be underfired with producer gas, but, if desired, can be heated with blue gas or oven gas. Provision has also been made for steaming of the ovens. The ovens are designed to operate on a normal coking time of twelve hours, which can be reduced to eleven hours or increased as desired, permitting of the greatest flexibility in the production of gas and coke.

This is the third Koppers Coal Gas Plant contracted for during 1923, the other two plants being located at Battle Creek, Michigan, and Zilwaukee, Michigan, respectively, and is a further indication of the increased confidence of the gas industry in the Koppers Company's ability to serve it.

Proof that this confidence is warranted will be found in the operation of these plants, which, we believe, will mark an epoch in efficient coal gas manufacture.

The KOPPERS COMPANY

Pittsburgh Chicago

AMERICAN GAS JOURNAL. Oct. 17, 1923. Vol. 119, No. 17. Published weekly by American Gas Light Journal, Inc., New York, N. Y. Entered as second-class matter Jan. 9, 1917, at the post-office at New York, N. Y., under the Act of March 3, 1879.

American
GAS JOURNAL

Vol. II No. 17 NEW YORK—OCTOBER 17, 1923—ATLANTIC CITY, N. J. Whole Number 3429

First General Session Meeting of the Convention Well Attended and Interesting Throughout

More than six hundred gas men crowded their way into the convention hall at the end of the Steel Pier yesterday morning for the first general convention session of the American Gas Association. Addresses and reports of the principal officers of the association and the election of officers for the coming year featured the meeting. The gathering listening attentively to Hon. Dwight N. Lewis, president of the National Association of Railway and Utilities Commissioners and a member of the Iowa Board of Railroad Commissioners.

To say that interest was shown in the proceedings, which lasted over two hours, is putting the facts mildly. It was necessary to ask a large part of more than five hundred of those who came in to the meeting to leave shortly after twelve, when the executive session was called to order. From the time President R. B. Brown rapped the gavel, at ten o'clock, until William J. Clark finished his announcement for the entertainments to follow throughout the remainder of the convention, there was not a dull moment and the closest attention was paid to the various reports.

Colonel Oscar H. Fogg, secretary-manager of the association, was introduced by President Brown, after a brief introduction, opening the session. Mr. Fogg, as headquarters executive for the association, told of the satisfaction he felt at the progress of the association. Measuring this progress in numbers, Mr. Fogg pointed out that there were now more than 500 gas company members enrolled in the association, a goal that had long been coveted.

Co-ordination between the A. G. A. and its affiliated associations was touched on by the secretary-manager, who spoke of the able work which had been done in this direction by Kurwin R. Boyes, who came to the association from the Providence Gas Company. Turning to the helpfulness and value of the national association to its affiliated associations, Mr. Fogg said:

"With respect to the association's national activities, as differentiated from the activities of its sections, it may be said without exaggeration that they have

(Continued on page 368)

Gas Heating Not a Luxury

Most Efficient and Economical Method

David J. Collins, Vice-President of the U. G. I. Contracting Co., is a man broad of vision and one who, when he speaks, says something of vital interest to the men of the A. G. A.

"I have been in the gas business forty years," said Mr. Collins, "and I am elated at the progress that has been made in the methods of operation, the advance of sales performances and the development of the art of using and disposing of gas.

"Gas, as we all know, was first used for lighting. It was at the head of its class, then, but in more recent years it has lost, to a great extent, its popularity and its value for that purpose. The gas field of activity is now, and must be in the future, along the heating line. House heating and use as commercial and industrial fuel. From its consumption there is no waste, it is smokeless, and modern equipment has made it safe and convenient to use any and everywhere.

"I see a wonderful future stretching out before us. Prosperity can not help but be ours. Sales per capita and per meter will increase year by year and we

must keep ourselves in readiness to supply the demand which will continue to come to us in ever-increasing quantities.

"I was rather shocked to read a headline in one of Atlantic City's morning papers: 'GAS HEATERS A LUXURY UNTIL RATES CHANGE.' Gas heating is not a luxury—it is the cleanest, the best and the cheapest way of heating a home, and while the $20.00-a-week workman may not be able to afford it, the average American citizen is certainly in a position to have this heating system installed in his home. It is not only efficient, but, all things considered, economical as well. Coal means ashes, storage space and other things to be considered when costs are figured. Heating by gas is far from being a luxury, the morning paper notwithstanding.

"Another thing. The character and burning efficiency of manufactured gas is replacing natural gas and will continue to do so. The public sees the convenience and economy of using gas for many purposes and is awakening to its possibilities. Many minds in the industry are working on its problems. These men will increase its efficiency and lower its cost.

"The gas industry is in excellent condition from all angles. Public opinion is more healthy and our securities are more easily placed. Every man in the American Gas Association should be an optimist. If he reads and analyzes our future, he cannot help but be one."

Here's Enterprise For You

The Central Hudson Gas Co. is issuing a one-page typewritten bulletin daily, containing items of interest about the numerous members of its organization that are attending the Convention.

John B. Klumpp, New President, A. G. A.

Faithful performance and a loyalty to the industry has again been recognized and rewarded in the election of John B. Klumpp, Philadelphia, as President of the American Gas Association for the year 1923-1924.

John B. Klumpp has been a wheel horse in the Association since its organization and he has filled many offices and committee chairmanships with credit to himself and to the gas industry. He was Chairman of the Technical Section during the years of 1918-1919. A member of the Board of Directors during 1920-1921-1922, and Vice-President in 1922-23. He has been a steady, diligent worker for the cause and no better selection of a President could possibly have been made. If any one is qualified to guide the destinies of the American Gas Association John B. Klumpp is. He has spent practically all of his life in the gas business.

Mr. Klumpp was born in Jersey City, N. J., and graduated from Stevens Institute in 1894. Shortly afterward he entered the employ of The United Gas Improvement Company, where he has since served in numerous capacities, including supervision of its inspection and valuation work. He has also served as Superintendent of the Omaha Gas Company, and is President of the Allentown-Bethlehem Gas Company. In addition to his duties with the U. G. I., he is consulting engineer of the U. G. I. Contracting Company.

Campbell On the Coast

A Travelogue

"Hello Syd, old pal, have a seat. Glad to see you."

Thus spoke L. L. Campbell, District Sales Manager, Radiant Heat Corporation of America.

"Yes, I have just returned from my Pacific Coast trip, and believe me, I certainly had one grand time. Of course, you realize that one leaves his home office on a business trip it is a night and day proposition, and there is no let-up whatsoever.

"One of the first stops I made was through the State of Ohio, checking up things appertaining to the Radiant Heat industry, and I am glad to be able to report that I found conditions splendid.

L. L. CAMPBELL

"Oh, yes, I stopped at Chicago, but it so happened that I hit there Sunday morning and found myself very busy making connections with the Santa Fe train for Kansas City. That is a wonderful trip. It is a daylight ride through a beautiful part of our country and I was fortunate in meeting some very agreeable people. One member of the party could both speak and drink Scotch, as well as I could, and well—I said it was a wonderful trip.

"Kansas City has a big building boom on at present. They are constructing many beautiful homes, especially in the restricted districts and business for the gas man is good. Saw R. W. Hoey, of course. There, my boy, is a real, live, honest-to-God gas man.

"It is a long trip from Kansas City to San Francisco. Three days and three nights, but when the old 'rattler' did pull in Tom Arrowsmith, a big grin on his face, was waiting for me, just bubbling over with California hospitality and friendliness. That surely is a great bunch on the Pacific Coast and they give you a rousing good welcome.

"The Pacific Coast gas men seem like one large family of fine fellows. I think they are much broader in their business vision than we are. They do not worry about competition and they will go out of their way to help out the other fellow. They are not jealous of each other, do not know the meaning of the word 'knock,' but when it comes to boosting, they are the salt of the earth.

"Attended the meeting of the Pacific Coast Gas Association at Del Monte. It is one of the show places of California and an ideal spot for a convention. No trouble to get the boys to go there. Golf, on a beautiful course, outdoor swimming pools, tennis courts, some magnificent drives and a great hotel with the best of service. The convention lasted three days, but most of the boys came several days in advance and stayed around a while after it was over.

"You know, Syd, I could sit here all morning talking to you about the Pacific Coast. The men in the gas business out there have the right system, they get in closer communion with each other than we of the East do. They get really acquainted with each other, work and play together, and are better off for it. This habit of hammering and knocking each other is bad stuff. They don't stand for it in the West. Every man there stands on his own footing, he must be a man among men, everything a 100 per cent gas man should be. They do not stand for fourflushing out there. You've got to expend honest endeavor in the West, honest-to-goodness plugging and get results.

"We, of the East, have much to learn—from the West."

BERNARD J. MULLANEY Always Has Good Advice for Gasmen

T. C. RATCLIFF, of the Baltimore Gas Appliance Mfg. Co., Riding a Vehicle Very Similar to the Water Wagon

C. O. G. Miller the New Vice-President

C. O. G. Miller, newly-elected vice-president of the American Gas Association, celebrates his fortieth year of continuous service in the gas industry this year. On December 1, 1883, he entered the employ of the United Gas Improvement Company, of Philadelphia, which company had leased the works of the Central Gaslight Company of San Francisco. Ten months later

the Pacific Gas Improvement Company took over the lease and Mr. Miller continued with them.

Between the years 1886 and 1900 he occupied the offices of treasurer, secretary and treasurer, and president. In 1903 the company consolidated with the San Francisco Gas and Electric Company and Mr. Miller was elected a director. In August, 1886, Mr. Miller together with W. B. Cline, now president of the Los Angeles Gas and Electric Corporation, formed the Pacific Lighting Company for the purpose of owning and operating small gas plants throughout California. He was treasurer of this company from 1886 to 1889, secretary and treasurer from 1889 to 1898 and has occupied the office of president from 1898 to the present time.

Mr. Miller is a director and member of the executive committee of the Pacific Gas and Electric Company, San Francisco Gas and Electric Company, Los Angeles Gas and Electric Corporation, and the East Bay Water Company, which supplies water to seven or eight municipalities on the east side of San Francisco Bay, including Oakland, Berkeley and Alameda. In addition to his utility interests, Mr. Miller is a trustee of Leland Stanford University, a director and vice-president of the Mercantile Trust Company and the Pacific Coast Borax Company, and a director of the Pacific Coast Joint Stock Bank, Kennedy Mining and Milling Company and Realty Syndicate of Oakland, California.

Pop Stevens Here He Is Wearing A Happy Smile

Pop Stevens, of the Latimer-Stevens Co., Columbus, O., was comfortably sunk in a roomy wicker chair in his exhibit on the Steel Pier when a reporter caught him. "Hello Pop," said the reporter. "Hello yourself," said Pop. "What do you know?" said the reporter. "A lot of things that I'm going to keep to myself," said Pop. "That's alright," said the reporter, "but what do you know that is of interest to the gas men?" "Well," said Pop, "this is sure some great convention. The exhibits are larger and more comprehensive than ever before. The fellows are all happy over having plenty of business and they are having a whale of a good time in Atlantic City.

"Business has been excellent with us. We've improved our product in several ways, are making several new types of connections and increased our capacity. The trade in general, some how or another, seem to like our stuff and while we've had to take care of our old customers, still we've been able to take on a few new ones.

"Conditions in the industry are fine," said Pop, "now you run along and eat your lunch—that's what I'm going to do. Good-bye."

Also For the Ladies

There will be a card party and tea in the Submarine Grill at the Hotel Traymore at 3 o'clock Wednesday. Tickets should be gotten at registration desk.

A "Push" Meeting

Commercial and Industrial Sessions Listen to Papers on Selling Gas for Industrial and Other Purposes

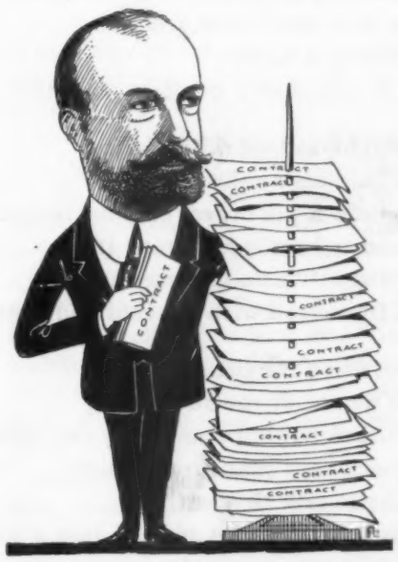
Co-operation to increase sales and co-operation to increase the use of gas itself for industrial purposes featured the combined session of the Commercial and Industrial Gas sections of the American Gas Association on the Steel Pier yesterday afternoon. From the opening remarks of Chairman William Gould, of the Gas & Electric Improvement Company of Boston, Mass., one was quickly able to grasp the idea that this was a "push" meeting. Each succeeding speaker strengthened the impression and from the many suggestions that were offered during the afternoon from the floor of the meeting as well as from the platform, it is almost certain that each of the three hundred gas men in attendance was able to take away at least one idea.

The half dozen scheduled speakers, the awarding of the prizes, the informal discussion from the floor were all designed to boost the different parts of the gas industry. In the words of Chairman Gould, "during the past twelve months and since the last convention, the gas company members have made records in their sales of gas and appliances."

"I feel that our Commercial Section has been one of the great helpful influences in bringing this about," he continued, "and places us in a position to take unto ourselves increased enthusiasm and interest in the work to be done during the coming year."

GETTING INDUSTRIAL BUSINESS

The Industrial Gas section was represented in the afternoon's session by E. G. de Coriolis, industrial engineer for the Eastern Service Company of Boston, Mass. Mr. de Coriolis read a paper entitled "How to Get Industrial Gas Business."



D. J. COLLINS, U. G. I. Contracting Co., With His File Nearly Full

This paper will be printed in full in a later issue of the AMERICAN GAS JOURNAL. A lengthy discussion followed its reading. Many of the speakers went even further than Mr. Coriolis' title and gave their ideas on how to hold the business once it had been gained. In general, the outstanding point made was education and service, the two combined at the beginning and the service continuing after the education had been accomplished as a means of retaining the business.

The report of the nominating committee at this session was presented by Dorsey R. Smith, of the Consolidated Gas, Electric Light & Power Company, of Baltimore, Md., as chairman. Following his report the nominations were formally approved and new officers elected, as follows: Chairman, J. E. Davies, the Peoples' Gas Light & Coke Co., Chicago, Ill., and Vice-Chairman, J. P. Hanlan, Public Service Gas Co., Newark, N. J. Fuller details of this report are presented on another page. The same is true of the presentation of prizes in the contest on appliance sales per meter contest. The presentation was made by Association President R. B. Brown.

"Advertising and Its Relation to Merchandise Sales" was taken up by William Seely, sales manager for the Osborn Company, of Newark, N. J. "This House Heating Business" was discussed in a paper by G. I. Vincent, manager of the Syracuse Lighting Company and the report of the sales stimulation committee was presented by the committee chairman, J. E. Davies, of the Peoples' Gas Stores, Chicago.

Yesterday morning showed that the illustrated talk on shipping containers, which the Manufacturers' Section had listened to the previous afternoon, was to have yet more illustrations. Mr. Plaskett spoke of how manufactured products could and should be packed so as to reach their destination in the same condition in which they started. At one booth the man in charge—why give names—explained that "the exhibit just came from another city, and the fellows there, you know, were probably amateur packers, just like we are, and so some of the glass is gone." Still the exhibit was good-looking, but if the packing had been a bit better, then ——

Mister Myways Thebest.

By SYD

Did you ever meet the fellow
With a six-inch streak of yellow
Who threw cold water all the live long day?
Submit a plan that's new and novel
For a palace or a hovel
He will tell you that it can't be done that way.

Write a bright and sparkling letter
That you think is a sales getter
And will put a lot of orders on your books.
With a sneering smile he'll read it,
Then he'll say "We do not need it."
And he'll freeze you with his cold and nasty looks.

If you mention advertising,
And some new stuff you're advising
With illustrations that show class and taste,
He will knock your plans to smithers
With sarcastic talk that withers
As he tells you "All that junk is just a waste."

When his days on earth are ended
And to Heaven (?) he's ascended
He'll look around at things they have to show.
If the angels wear—just tresses
He'll want to put them all in dresses
And I hope Saint Peter sends him down below.

Grier Hirsh, Pres,; Wallace G. Murfitt, 1st V. Pres.; W. Griffen Gribbel, 2d V. Pres., Geo. L. Cullen, Secy.-Treas., Penna. Gas Association

Pennsylvania Gas Association Hold Meeting and Banquet

The Pennsylvania Gas Association held a meeting and dinner in the club room of the Traymore last night. Among those who were present were Grier Hirsh, York, Pa., President of the Association; Wallace G. Murfitt, Newton, Pa., First Vice-President; W. Griffen Gribbel, Philadelphia, Pa., Second Vice-President, and George L. Cullen, Secretary-Treasurer. A discussion of a system of classification of accounts, as proposed by the Public Service Commission of Pennsylvania, was the principal item of business at the meeting.

Gas Men and Their Ladies Dance

Thousands Enjoyed Evening On the Steel Pier

Over a thousand gas men, their wives and sweethearts tripped the light, fantastic toe on the Steel Pier last night. Promptly at 8.30 the strains of the fox-trot and the waltz floated into the air and the good looking men and beautifully gowned women swayed to the alluring music furnished by the Blue and White Serenaders.

The first social feature of the Convention under the auspices of the Entertainment Committee was certainly an enjoyable one. This is a day of dance, for the old as well as the young, and the grey haired, dignified fathers of the industry mixed and mingled in happy rhythm with the younger ones.

Interspersed betweed dances was an exhibition of ball room dances by two wonderful performers. The watchers were not only entertained by them, but picked up a few new steps and added them to their own stock.

Next came two whirlwind dancers from a local cabaret. They held their audience spellbound as they raced round and round, executing many difficult and unusual steps. Both the ball room and the whirlwind dancers received much applause at the conclusion of their exhibitions.

The punch bowl (containing fruit punch, delicious, but harmless) was in evidence all the evening. As fast as the thirsty dancers reduced it to the danger line, the attendants replenished it.

Refreshments, ice cream and cakes were served during the evening. The cream was in unique forms and the cakes tastily served.

If the dance is a sample of what the Entertainment Committee is going to do, then the delegates may well look forward to a most enjoyable round of entertainments.

For the Ladies

Premier of New Play at 10 A. M. Wednesday

A very novel and unique entertainment will take place Wednesday morning at 10 o'clock in the Auditorium of the Steel Pier. While it will appeal to the men, it will be of especial interest to the wives and sisters of the delegates attending the convention.

Three very attractive young ladies will present a playlet entitled "Progress." The cast consists of "Miss Mary Modern Way," played by Miss Addie B. Swann. "Miss Polly Old Time," impersonated by Miss Marjie Pigeon. Miss Ethel Hughes is the supporting company.

The stage settings and lighting effects will be up to the most modern and approved stage standards and the dialogue is bright and sparkling. The playlet has two scenes, one an old-fashioned kitchen and the other a new, modern one.

Most of us are sentimental and love the old-fashioned things, but "Progress" is written so that "Miss Modern Way" is the outstanding character and shines throughout the performance.

None of the ladies attending the convention should miss this feature. It will be most entertaining, to say nothing of the knowledge about kitchens and cooking.

FIRST GENERAL SESSION

(Continued from page 361)

become of greater importance and have been accompanied by results of immeasurable benefit to the gas industry in all sections of the country."

Referring to the employment, as consulting counsel of Carl S. Jackson, formerly chairman of the Wisconsin Utilities Commission, Mr. Fogg applauded this step and said that Mr. Jackson's services, which are shared jointly with the National Electric Light Association, had enabled the American Gas Association to render to its members a service the value of which he found himself unable adequately to express.

A. Gordon King, now service engineer on the headquarters' staff; Messrs. Stotz and Sellman, the secretary-manager's immediate assistants; Mr. Scofield, in charge of editorial and statistical work, and the other members of the headquarters staff were also praised by Mr. Fogg for their work.

The report of the membership committee followed. It was announced that applications for membership had been passed on during the year for 57 gas companies, 59 manufacturing companies and 315 individual memberships, the last group being voted membership upon conclusion of the report.

Treasurer H. M. Brundage, of the Consolidated Gas Company of New York, then gave his report. He reported a cash balance of $21,500 in the treasury at present and assets of $123,000, as compared with $109,000 last year. Receipts during the year, he told the meeting, had totalled $260,417, as compared with $228,300 during the previous fiscal year. His report was greeted with frequent applause and accepted by the convention body.

HOUSE HEATING

House-heating with gas made up the greater part of President Brown's address. Following a few remarks, directed generally to the progress of the association and the situation of the gas industry as regard the problems and the manner in which the organization had set about meeting these problems, the president turned to the heating problem, on which he dwelt at some length.

MORSE DELL PLAIN, V. P. Northern Indiana Gas & Electric Co.

President Brown admitted that the entire problem was a controversial one and continued with the assertion that house-heating with gas was not to be expected by this generation, unless the entire present method of charging for gas service were completely overthrown immediately and an equitable, scientific rate structure were substituted, permitting gas companies to charge each class of gas users for the specific service demanded, whether that were for cooking, lighting, heating or industrial or other uses.

The present system of charging for gas service, he attacked, stating that it had not been revised since the beginning of the use of manufactured gas, to meet the thousand uses for which gas is consumed today. He characterized present rates for gas service as unfair and discriminatory against the average family and favorable to the wealthier class, who use little gas. The rank and file of gas users, he said, pay more for their gas service than a growing minority group of favored customers who do not use enough gas to pay the cost of delivering it.

"With scientific rates in force, house-heating with gas will be a luxury—well worth its cost in convenience and sanitation to those who can afford it," he said. "I believe that the gas industry will be surprised at the amount of house-heating which will be requested on the basis that such users will be required to pay for the actual cost of service."

Stating that gas companies which seek house-heating on faith as to some hypothetical developments, and on rates less than the true cost of service surely court disaster, he said that with house-heating, the proportion of time that the gas plant equipment is idle will be greatly increased. The fixed cost, such as taxes, interest and depreciation, will be three times as great for house-heating as for present average use and as a result under present forms of rates, gas service charges will have to be increased for all people. But if the equitable rate is introduced, and those who want house-heating can be properly charged for this special service, then gas companies can safely meet the requests without increasing the rates to their customers in general.

"The gas industry faces its most assured future," he said. "In spite of increased cost of coal and other material, the gas industry during the year gave very close to 100 per cent. service. Its rate did not nearly approach the increases in almost every necessary item contributing to the average family's living expenses. We must continue to strive to keep gas service the cheapest item of the daily necessities of life. What we have done most emphatically gives the lie to the slams which have been handed the gas industry and its personnel."

CHANGES IN REGISTRATION FEES

Following President Brown's address, William J. Clark, chairman of the Amendments to Constitution and By-Laws Committee, reported on the change which had been made in the registration fees for individual members. This proposition was voted on by mail and was approved by a majority of the members of the association. By the change, Class A members will now pay $5.00 for annual registration in one section and 50 cents for each additional section. The class comprises employes of gas and equipment manufacturing companies. Class B, comprising persons interested in the gas industry, but not actually employed in it, will henceforth pay an annual registration of $8.00 for one section with 50 cents for each additional section. Class C members, comprising technical school instructors, government officials and the like, are to pay an annual registration of $3.00 for any number of sections. Mr. Clark noted that Class A and Class B memberships were invitation memberships.

The formation of the new industrial gas section was reported as was the decision to admit to company membership, furnishers of natural gas.

ELECTION OF OFFICERS

The election of the officers for the coming year, nomination of whom was reported to the association in July followed after a reading of the list by Charles M. Cohn, chairman of the Nominating Committee.

J. B. Klumpp, of Philadelphia, Pa., became president for the coming year; C. O. G. Miller, of San Francisco, Calif., vice-president, and H. M. Brundage was re-elected treasurer.

F. H. KNAPP, Pres. Pittsburgh Water Heater Co.

Mr. Klumpp and Mr. Brundage spoke briefly. A telegram from Mr. Miller, regretting his inability to be with the association because of inconveniently protracted business affairs, was read to the meeting.

S. E. Mulholland, of the Northern Indiana Gas & Electric Company, Fort Wayne, Ind., as chairman of the Time and Place Committee, presented the report of that group which had found difficulty in deciding on the city for the next convention and asked that the decision be put in the hands of the executive committee. The report was accepted and President Brown directed that it be referred to the executive committee. The text of the report follows:

Mr. Lewis, in his address, dwelt on the attitude of the average citizen to the public utility and sought to impress on the meeting the need for the gas industry going out of its way to make friends with the public. Speaking of fire as the most elemental of the perquisites of civilization, he expressed surprise that the industry had not taken advantage of the fact to bind the public to it in bonds of friendship instead of ignoring the people upon whom it was dependent for life. Mr. Lewis quoted numerous figures concerning the industry of which he had been surprised to learn in a brief investigation into the gas business of the country. Service and the smokeless city he held out as two aims for the gas industry, one to be held in constantly in mind as a path success, the other as the gold at the end of the path.

In a discussion of "The Right to Perform Public Service," Mr. Jackson, newly appointed counsel of the association, dealt with embarrassing legislation and inveighed against restrictive legislation at considerable length. The courts were beginning to recognize, he told the meeting, that a public utility, although it is a public service, is still privately owned property and is subject to private management. Instances of legislative restriction in New York were brought in by Mr. Jackson, who accounted "dollar a thousand" gas as passed by the Legislature as a most regrettable occurrence.

Following Mr. Jackson's address there were a few brief announcements and the meeting was then adjourned to give way to the executive session.

Publicity and Advertising Session Meeting

Mullaney Presented With Gold Cuff Links

The Publicity and Advertising Section of the A. G. A. held its first session in Room 17, Chalfonte Hotel, on Tuesday. There were over fifty members present and the meeting was of the livest. Every phase of the publicity and advertising of the gas business was discussed at length. About sixteen of the men present delivered some message of interest to those assembled.

The Directors of State Committees on Public Utility Information presented to Chairman P. J. Mullaney a very beautiful pair of gold link cuff buttons. Mr. Mullaney was much touched by the thoughtfulness of the gift and responded with a speech of thanks.

The meeting then adjourned until Wednesday afternoon.

Rotary Meeting

The Atlantic City Rotary held their weekly meeting Tuesday in the Grill of the Ritz Hotel. About fifty visiting gas men, Rotarians in their respective cities, attended the meeting. A talk, with pictures, about the extermination of mosquitoes in the State of New Jersey proved very interesting. The visiting Rotarians now know how to kill these pests in a dignified and efficient manner and will spread the news throughout the entire country.

JOHN V. HARTOG Believes This Is the Key to Success

Contact Between Customer and Company, All Important, Says H. H. Ganser

"The chameleon is equipped to get the most with the least effort—but who wants to be a chameleon?"

H. H. GANSER

said H. H. Ganser, Manager Counties Gas & Electric Co., Norristown, Pa.

An exertion of power, physical or mental, after all is the righteous way to get anything that is at all desirable.

The thought uppermost in my mind, today, is the establishing of avenues of contact between cuscomer and company. Every movement that tends to bring the customer closer to the company, whether it be a desire for service or a communication that leads to a bettering of, or an extension of service, will reflect to the strengthening of public relationship. Therefore, it behooves everyone in the industry to devise ways and means, of a simple character, that will permit the carrying out of this thought. In other words, let's eliminate "red tape," forget everything other than that the public be pleased, and make it as simple as possible for the customer to communicate to us what he has in mind, whether it be complaint or compliment.

"BILL" GUITTEAU Stopped Off Here on One of His Country-Wide Tramps Selling Gas Holders

Ruud Men Get Together

The Ruud Manufacturing Co. held a get-together conference of their various representatives at the Traymore Monday morning.

C. E. Bartlett, of Philadelphia, gave several sales talks, short but stimulating. E. J. Horton, mechanical engineer, gave a brief talk developing a new slant on mechanical construction.

Ed Steinmuller, Sales Manager of the New York Engineering Co., New York, is very optimistic about the future of gas. His company only recently took up the manufacture of a line of gas plant equipment and Ed is keeping the plant busy.

Large Scale Distribution of Gas Coming, Says F. C. Lee

"I believe the day is soon coming when gas will be distributed over considerable distances under high pressure through small mains and then be given local distribution from local holders at a lower pressure," remarked F. C. Lee, of the Industrial Fuel Department of the Consolidated Gas and Electric Light and Power Co. of Baltimore, Md. It was in reply to the question whether it would be possible for the gas industry to centralize gas production, as the electric power industry is tending more and more to centralize the generation of electric current. He continued: "That has been done in England, and I believe that it ought to be done here, though, of course, the transmission of gas is more difficult than that of electricity." Mr. Lee, when asked about the competition, if any, between gas and electricity, said that, while the latter might be attracting a little more interest now, because of its comparative newness, yet gas was very surely coming into its own and its position was secure. He felt that the use of gas for house heating and hot water systems was especially sure to show an increase. And the convention exhibits? "Certainly very, very fine. A mighty good showing."

P. D. WARREN, Who Is in Charge of the Accounting Section Exhibit

Mean Trick "Shad"

While wandering among the exhibits Monday, Ed Dickey's attention was attracted by a crowd at one end of the Combustion Utilities Corporation booth.

Drawing within hearing distance, Ed's ears tingled and pleasant anticipations were conjured up at the constant repetition of the word: "Still!"—"Still!"—"Still!"

A pair of long, slim hands were turning on a valve here; shutting off another there and the regular drip!—drip! of **some** liquid assumed a steady cadence.

All a-flutter, Ed drew closer. A familiar head bobbed up, which he recognized as belonging to Gilbert Shadwell. The demonstration ended; the crowd melted away and with feverish excitement permeating every fibre of his being, Ed lunged forward—**No, it wasn't that kind of a still!** It was a device for distilling **water** for use in batteries. Mean trick, "Shad."

Frank Moses, of Gas Engineering Co., Trenton, N. J., was seen strolling along the Boardwalk with his coat closely buttoned. There was a bulge on the right side which may have been a package of contracts—and then again it may have been something else.

W. R. SAUER, Chairman-Elect Accounting Section

A Mistake Corrected

In our Tuesday's issue there appeared an article about F. S. Norris and G. Wallen which was badly garbled. What we intended to say was:

We note with regret the resignation of Earnest A. Hills, Assistant Secretary of the Canadian Gas Association. Mr. Hills has resigned to take charge of a gas property in Canada and carries with him the best wishes of both Canadian and American gas men.

We are glad to welcome G. W. Allen, his successor, back into the fold. Mr. Allen was associated with the gas industry in Canada for many years.

Besides acting as Assistant Secretary of the Canadian Gas Association, he is also to be the editor of the "Intercolonial Gas Journal of Canada."

It is well known that Mr. Norris is President of the Montreal Light, Heat & Power Co.

Exhibition Spotlights

Gas men stopping at the booth of the P. H. and F. M. Roots Co. wanted to know where the boiler was that furnished steam that ran the steam engine that ran the blower that was connected with a positive flow meter. Something like the pig and the stile rhyme. A small motor behind the engine did the trick. The installation was very neat and attractive.

No! What you see in the large glass bowl in the Gas Purifying Materials Co. booth is not browned Saratoga Chips or—at another guess—Chocolate flakes; they prove to be on closer inspection, flakes of standard iron oxide. As there is nothing else in this booth to detract the visitors' observation — outside the presence of genial Bernard D. Klein, in charge—it proves an outstanding feature that compels the attention of visitors along that aisle.

Two bricks, up-ended — each with a thermometer inserted—on a square box, intrigues the curiosity of visitors at the booth of Quigley Furnace Specialties Co. On closer inspection it will be found the left hand brick, which is an ordinary fire brick, is **hot** at 60 degrees; while the one on the right side is **cool** at 100 degrees.

H. T. Matthews, in charge, explains the reason for this. Between the two bricks is the heating element—the heat being generated by an electric current. The demonstration is designed to show the relative conductivity of Quigley insulated brick with ordinary fire brick. The evidence, as shown, is convincing, indeed.

The brook that runs on forever is not more mysterious than Mueller's Mysterious Faucet, in front of the booth of the H. Mueller Mfg. Co., Decatur, Ill. The faucet and the water flowing from it really don't represent the company, because there is all outgo and nothing coming in, so far as one can see. The reporter happened along when it was being explained, and then it was perfectly simple. Where does the water come from? Oh, well, that's the point.

They were "pouring" yesterday morning in front of the Steel Pier. No, it wasn't tea in the Efficiency Kitchen of the A. G. A. at the left of the entrance, the place where cookies are cooked. It was on the other side, where the crucible furnace of the Surface Combustion Co. had been melting brass. Two or three times that morning they "poured" and cast some shining brass letters which were helping to explain that "if it's done with heat, you ——" You know the rest.

Standing out in strong relief against a black background in the booth of The Roberts Brass Mfg. Co., are three gas cocks of varying sizes; depicting the growth of their business over a period of 14 years.

The year 1909 is represented by a regular type N. C. G. A. gas range cock. The year 1916 by a gas cock about ten times larger, weighing approximately 60 pounds. The year 1923 by a gas cock approximately twenty times larger than the regular N. C. G. A. type, weighing 146 pounds. These gas cocks are practical and made of brass, nickel-finished with porcelain handles. They were constructed in their own plant and are an attraction that cannot be missed by the eye of the visitor.

"Billy" Barrett, of New York, is here renewing old acquaintances at the A. G. A. meeting. Billy is still young in years but old at the gas game, and going strong.

American Gas Journal

SIXTY-FIFTH YEAR

Published Weekly by American Gas Light Journal, Inc., 53 Park Place, New York, N. Y.
Daily Edition, published in Atlantic City, October 16, 17, 18, 19, 1923.

ELBERT P. CALLENDER, President. S. G. KRAKE, Vice-President-Treasurer. A. M. GLEASON, Secretary.

ISMAR GINSBERG, Technical Editor

CHARLES S. MYERS, Field Representative

Editorial Offices: Atlantic City, Chalfonte Hotel.

Registration of A. G. A. Membeos Up to 3 P. M. Tuesday

A

Andrew, Harold O.; New York City; Shelburne
Abell, H. C.; New York City; Traymore
Alden, J. D.; Westchester, N. Y.; Breakers
Anklam, Crisfield, Md.
Althen, Geo. R.; Baltimore, Md.; Ritz-Carlton
Allington, John B.; Rochester, N. Y.; Chalfonte
Allison, Walter A.; Philadelphia, Pa.; Chalfonte
Arthur, J. S.; Brooklyn, N. Y.; Raleigh
Acker, E. A.; Kingston, N. Y.; Chalfonte
Adams, Frank H.; New York City; Traymore
Aspinwall, Chas. C.; Brooklyn, N. Y.; St. Charles
Andrews, C. W.; Duluth, Minn.; Marlborough
Ashworth, James; Jersey City, N. J.; Marlborough
Adams, L. D.; Dixon, Ill.; Mt. Vernon
Arnold, Geo. W.; Westminster, Md.
Allen, Ernest W.; Lynn, Mass.; Strand
Allen, George W.; Toronto, Canada; Knickerbocker
Adams, Walter J.; Long Island City, N. Y.; Morton
Addis, E. M.; Wallingford, Conn.
Allen, Geo. M.; Detroit, Mich.; Breakers
Austin, Geo. B.; Newport, R. I.; Haddon Hall

B

Bohn, A. Valentine; Newark, N. J.; Haddon Hall
Btnsel, C. Lester; Trenton, N. J.; Strand
Benedict, David B.; New Brunswick, N. J.; Strand
Bierce, Thurber H.; Newark, N. J.; Haddon Hall
Brockhoff, Harry C.; Chester, Pa.; St. Charles
Beebe, A. M.; Rochester, N. Y.
Brewer, Edward D.; Atlanta, Ga.; Haddon Hall
Barnes, Cyrus; Boston, Mass.; Traymore
Baker, Perley H.; Everett, Mass.; Chalfonte
Brennen, J. J.; Memphis, Tenn.; Strand
Bell, W. R.; Haverhill, Mass.; Chalfonte
Bains, Geo. B.. 3rd; Harrisburg, Pa.; Traymore
Barnes, Albert M.; Cambridge, Mass.; Traymore
Batten, J. W.; Detroit, Mich.; Traymore
Bennett, C. W.; Detroit, Mich.; Traymore
Bennett, James M.; Philadelphia, Pa.; Colton Manor
Brackett, Arthur E.; Boston, Mass.; Seaside
Brenner, Erwin C.; Milwaukee, Wis.; Haddon Hall
Bryans, Henry B.; Norristown, Pa.; Traymore
Botts, G. G.; Chicago, Ill.; Breakers
Boyd, Albert M.; Philadelphia, Pa.; Traymore
Buckminster, Rollin; Pawtucket, R. I.; Chalfonte
Beugler, H. M.; Poughkeepsie, N. Y.; Traymore
Barthold, Wm. H.; New York City; Traymore
Brown, J. Everett; Ardmore, Pa.; Strand
Burr, A. R.; New Haven, Conn.; Strand
Beckjord, Walter; New York City; Traymore
Burger, Rudolph E.; New York City; Traymore
Bean, Benj. J.; Hyde Park, Mass.; Dennis
Brady, J. C.; New York City; Bothwell
Boyd, George H.; New York City; Haddon Hall
Beadenkopf, George; Baltimore, Md.; Chalfonte
Bischoff, Frank J.; New York City; Iroquois
Battin, H. W.; Camden, N. J.; Shelburne
Barrington, Walter D.; New York City
Brundage, Henry M.; New York City; Chalfonte
Brown, Ralph Lyman; Pittsburgh, Pa.
Blackwell, Edwin G.; New York City; Traymore
Buck, A. B.; New York City; Traymore
Boyd, Wm. F.; Philadelphia, Pa.; Chelsea
Barlow, T. Scott; New York City; Chalfonte
Brady, Edw. J.; Philadelphia, Pa.; Traymore
Bennett, Chas ; Binghamton, N. Y.; Traymore
Bush, Robt. W.; Brooklyn, N. Y.; Traymore
Battin, W. I.; Philadelphia, Pa.; Traymore
Bird, V. E.; New London, Conn.; Chalfonte
Boline, S. T.; Philadelphia, Pa.; Ambassador
Braine, John H.; Brooklyn, N. Y.; Ambassador
Brown, Camerman; Pittsburgh, Pa.; Traymore
Baker, E. M.; Poughkeepsie, N..Y.; Chalfonte
Bailey, E. M.; Newark, N. J.; Strand
Bartlett, Craig S.; Elizabeth, N. J.; Haddon Hall
Behrman, Henry; Brooklyn, N. Y.; St. Charles
Bell, Ralph S.; Jackson, Mich.; Ambassador
Bellamy, Charles R.; New York City; Shelburne
Bennett, Orville G.; Ossining, N. Y.; Dennis
Benson, Blair V.; Montclair, N. J.; Strand
Bertolette, B.; Bristol, Pa.; Traymore
Blood, W. H., Jr.; Boston, Mass.; Ambassador
Bowley, Harry; Newark, N. J.; Haddon Hall
Brandt, A.; Newark, N. J.; Haddon Hall
Breese, Fred S.; Montclair, N. J.; Strand
Brill, A. P.; Pittsburgh, Pa.; Traymore
Britton, John A., Jr.; New York City.
Brock, William C.; Nantucket, Mass.; Runneymede
Brooks, Fernley T.; Phoenixville, Pa.; Haddon Hall
Brown, M. Eiton; Jamaica, N. Y.; Chalfonte
Babbitt, R. H.; Taunton, Mass.; Dennis
Byrne, D. E.; Brooklyn, N. Y.
Bettle, W. H.; Newark, N. Y.; Strand
Bergman, Andrew; New York City; Traymore
Blauvelt, Warren S.; Terre Haute, Ind.; Chalfonte
Burritt, Dwight F.; Chicago, Ill.; Traymore
Brearley, W. R.; Princeton, N. J.; Strand
Baker, H. N.; Mt. Vernon, N. Y.; Bothwell
Brug, C. J.; Niles, O.; Traymore
Beebe, F. H.; Ft. Wayne, Ind.; Breakers
Bailey, E. P.; Cleveland, O.; Traymore
Buttler, Jos.; Syracuse, N. Y.; Chalfonte
Bartlett, C. E.; Philadelphia, Pa.; Breakers
Woodring, William G. B.; Allentown, Pa.; Strand
Bean, Philip H.; Jersey City, N. J.; Albermarle
Blanchard, Geo. L.; Montpelier, Vt.; Chelsea
Beeden, George R.; Bayonne, N. J.; Chalfonte
Bird, Eugene H.; Pittsburgh, Pa.; Traymore
Bulkley, Warren T.; Lincoln, Neb ; Traymore
Barrett, William E.; New York City; Shelburne
Barton, Wm. H.; Portland, Ore.; Ambassador
Brown, Ernest W.; Toronto, Can.; Dennis
Bason, George O.; Newburgh, N. Y.; Chalfonte
Burrows, G. A.; New York City; Glaslyn-Chatham

C

Charles, L. A.; Hoboken, N. J.; Strand
Cremer, Geo. L.; Brooklyn, N. J.; Strand
Clayton, T. R.; Providence, R. I.; Haddon Hall
Cahill, Wm. J.; Utica, N. Y.; Traymore
Calhoun, Ervin; Philadelphia, Pa.; Seaside
Cameron, Reid A.; Chicago, Ill.; Haddon Hall
Collins, D. J.; Philadelphia, Pa.; Traymore
Chisholm, C. F.; Revere, Mass.; Chalfonte
Christman, H. S.; Philadelphia, Pa.; Strand
Crankshaw, J. Ward; Allentown, Pa.; Strand
Chewning, W. L.; Philadelphia, Pa.; Traymore
Conner, James F.; Philadelphia, Pa.; Traymore
Conroy, J. P.; New York City; Shelburne
Carter, William B.; Baltimore, Md.; Breakers
Crisfield, J. A. P.; Philadelphia, Pa.; Traymore
Corr, G. F.; New York City; Strand
Chrisman, C. S.; Philadelphia, Pa.; Traymore
Cougevan, T. M.; Canandaigua, N. Y.; Haddon Hall
Campbell, C. L.; Waterbury, Conn.; Ambassador
Clary, E. D.; Burlington, Ia.; Breakers
Carter, C. E.; Danbury, Conn.; Traymore
Connette, T. W.; Lockport, N. Y.; Traymore
Cauley, Frank F.; Chicago, Ill.; Ambassador
Codwise, G. W.; Albany, N. Y.; Marlborough
Cooney, Edward J.; Lowell, Mass.; Traymore
Coffman, E. Foster; Camden, N. J.; Shelburne
Crawford, C. M.; Greensboro, N. C.; Ambassador
Cassell, W. H.; Baltimore, Md.; Traymore
Cornish, R. C.; Philadelphia, Pa.; St. Charles
Carroll, Chas. E.; New Bedford, Mass.; Chalfonte
Crowley, Francis W.; New Bedford, Mass.; Chalfonte
Clay, Moble; Winston-Salem, N. C.; Ambassador
Coles, James M.; Elizabeth, N. J.; Traymore
Capen, Frank F.; East Boston, Mass.; Haddon Hall
Crafts, H. C.; Pittsfield, Mass.; Haddon Hall
Curley, Thos. F.; Stapleton, N. Y.; Haddon Hall
Cullen, Geo. L.; Harrisburg, Pa.; Traymore
Chadwell, Wm. H.; Newark, N. J.; Breakers
Comeau, Lucien; Manchester, N. H.; Chalfonte
Carter, Chas. F.; Nashville, Tenn.; Breakers
Carr, W. deL.; Hammond, Ind.; Traymore
Clark, John A.; Newark, N. J.; Haddon Hall
Curtis, S. P.; Philadelphia, Pa.; Ambassador
Cook, H. R.; Baltimore, Md.; Haddon Hall
Callender, D. E.; Racine, Wis.; Ambassador
Cartwright, H. R., Jr.; New York City; Traymore
Chamberlain, G. R.; Grand Rapids, Mich.; Traymore
Clark, Walton; Philadelphia, Pa.; Traymore
Collins, Carroll; Marshall, Mich.; Traymore
Culver, O. T.; Englewood, N. J.; Haddon Hall
Coates, G. V. A.; Brooklyn, N. Y.; Strand
Cornell, Charles F.; Brooklyn, N. Y.; Dennis
Claus, E. L.; Milwaukee, Wis.; Ambassador
Curtin, E. R.; Lima, O.; Traymore
Chubb, C. M.; Davenport, Ia.; Traymore
Chew, R. E.; Bloomington, Ill.; Ritz-Carlton
Coble, Walter I.; Chicago, Ill.; Ambassador
Carpenter, H. S.; Newark, N. J.; Albermarle
Clark, Robt. Y.; Brooklyn, N. Y.; Knickerbocker
Carnahan, G. C.; Chicago, Ill.; Ambassador
Carrison, R. H.; Atlantic Highlands, N. J.; Wiltshire
Crowley, J. P.; St. Paul, Minn.; Traymore
Connell, C. J.; Brighton, Mass.; Iroquois
Canniff, R. J.; Poughkeepsie, N. Y.; Chalfonte
Conover, E. R.; Tarrytown, N. Y.; Princess
Clark, Edwin A.; W. Roxbury, Mass.; Traymore
Clark, John C.; Philadelphia, Pa.; Knickerbocker
Carn, Nell; Kansas City, Mo.; Strand
Chamberlain, G. R.; Grand Rapids, Mich.; Traymore
Conklin, John P.; Brooklyn, N. Y.; Raleigh
Collins, D. J.; Philadelphia, Pa.; Traymore
Clark, R. K.; Chicago, Ill.; Chalfonte

D

Dunkak, E. B.; Passaic, N. J.; Strand
Dunn, Frank S.; Albany, N. Y.; Chalfonte
Dequine, L. E.; Long Branch, N. J.; Traymore
Donovan, M. A.; New York City; Chalfonte
DeCoriolis, E. G.; Boston, Mass.; Traymore
Duffy, Charles G.; New York City; Traymore
Dodds, Caryl J.; Lawrence, Kan.; Marlborough
Dold, G. T.; Burlington, N. J.; Strand
Davis, Joseph D.; Pittsburgh, Pa.
Davis, E. P.; Holland, Mich.; Ritz
Downs, G. B.; Toledo, O.; Traymore
Duncan, Ronald B.; Philadelphia, Pa.; Seaside
Drewson, John; Pittsburgh, Pa.; Traymore
Doherty, Jos. A.; Toledo, O.; Traymore
Dean, Geo. E.; Albion, Mich.; Ambassador
Douglass, Harry W.; Ann Harbor, Mich.; Ritz
Doherty, Haery L.; New York City; Traymore
Dashiell, P. T.; Philadelphia, Pa.; Traymore
Doering, Wm. A.; Boston, Mass.; Haddon Hall
Dembke, H. O. A.; Brooklyn, N. Y.; Raleigh
Dow, Col. Fred. N.; Portland, Maine; Haddon Hall
Demorest, Prof. D. J.; Columbus, O.; Traymore
Detweiler, C. A.; Pittsburgh, Pa.; Breakers
Dickson, J. Van Evrie; New York City; Haddon Hall
Drake, Francis E.; Lynn, Mass.; Traymore
Dudley, A. D.; Syracuse, N. Y.; Chalfonte
Duffield, C. M.; London, Canada
Dutcher, Herbert V.; Poughkeepsie, N. Y.; Chalfonte
Duvall, B. A.; Baltimore, Md.; Haddon Hall
Deierlein, Ed.; Rochester, N. Y.; Bothwell
Delong, J. C.; Syracuse, N. Y.; Ambassador
Davies, J. E.; Chicago, Ill.; Ambassador
Dickey, Edmund S.; Baltimore, Md.; Traymore
Doty, Albert M.; Baltimore, Md.; Traymore
Dunkley, W. A.; Memphis, Tenn.; Traymore
Day, A. B.; Los Angeles, Cal.; Ritz-Carlton
Downe, Edward R.; New York City; Traymore
Davey, A. F.; Sheboygan, Wis.; Ritz-Carlton
Duggan, F. P.; Lewistown, Pa.; Chalfonte
Dieterle, Edw. A.; Chicago, Ill.; Ambassador

Day, J. T.; Malden, Mass.; Chalfonte
Dutton, L. R.; Jenkintown, Pa.; Haddon Hall

E

Earle, Wm. H.; Rochester, N. Y.
Eavenson, W. K.; Fall River, Mass.; Chalfonte
Evans, O. B.; Philadelphia, Pa.; Traymore
Eigenbroth, J. L.; Lowell, Mass.; Traymore
Entwisle, I. H.; Washington, D. C.; Haddon Hall
Esherick, Jos.; Foxboro, Mass.; Traymore
Eichengreen, L. B.; Phila., Pa.; 5007 Atlantic Ave.
Edgar, H. T.; Woonsocket, R. I.; Chalfonte
Earnshaw, E. H.; Newark, N. J.; Strand
Ehmann, Edw. W.; Gloversville, N. Y.; Strand
Evies, P.; New Haven, Conn.; Haddon Hall
Eaton, H. M.; Detroit, Mich.; Ambassador
Earl, A. G.; Providence, R. I.; Haddon Hall
Elcock, F.; Ottawa, Canada
Elbert, V. L.; St. Joseph, Mo.; Dennis

F

Ferdon, C. J.; Brooklyn, N. Y.; Traymore
Fieldner, Arno C.; Pittsburgh, Pa.
Fusselman, Paul A.; Ardmore, Pa.; Strand
Ferris, H. H.; Newark, N. Y.; Strand
Farrel, J. L.; Passaic, N. J.; Strand
Folger, O. H.; Hackensack, N. J.; Chalfonte
Fraga, Geo. L.; Brooklyn, N. Y.; Strand
Ferguson, B. B.; Portsmouth, Va.; Strand
Frey, H. F.; Allentown, Pa.; Strand
Fritz, Edwin C.; Cleveland, O.; Traymore
Forstall, Walton; Philadelphia, Pa.; Traymore
Foulk, T. M.; Denver, Col.; Traymore
Fowler, Walter M.; Philadelphia, Pa.; Haddon Hall
Forstall, A. E.; New York City; Shelburne
Farnsworth, E. M.; Braintree, Mass.; Ritz-Carlton
Frame, Paul; Baltimore, Md.; Shelburne
Frick, John A.; Allentown, Pa.; Chalfonte
Francisco, E.; Newark, N. Y.; Chalfonte
Feucrs, H. C.; Sedalia, Mo.; Traymore
Fischer, Alfred; Ann Harbor, Mich.; Ritz-Carlton
Fulweiler, W. H.; Philadelphia, Pa.; Traymore
Fairchild, S. E., Jr.; Ambler, Pa.
Fenniman, John R.; New York City; Traymore
Fletcher, R. L.; Providence, R. I.; Haddon Hall
Freel, R. E.; Clinton, Mass.; Breakers
Fowler, J. Scott; Philadelphia, Pa.; Haddon Hall
Finn, H. J.; Chicago, Ill.; Ambassador
Frank, M. H.; Fond du Lac, Wis.; Traymore
Fritz, H. C.; Cleveland, O.; Traymore
Flanigan, C. D.; Athens, Ga.; Traymore
Fisher, Luella M.; Cleveland, O.; Strand
Flowers, Dean W.; St. Paul, Minn.; Traymore
Fisher, W. C.; Mt. Vernon, N. Y.; Ritz-Carlton
Frank, G. Harry; Chicago, Ill.; Ambassador
Florio, Victor D.; New York City; Bothwell
Fussey, A. W.; Detroit, Mich.; Traymore
Fitch, Fred W.; Brooklyn, N. Y.; Haddon Hall
Frary, Chas. O.; Chicago, Ill.; Traymore

G

Graham, W. H.; Philadelphia, Pa.; Strand
Goss, Archie J.; Chattanooga, Tenn.; Breakers
Goodwin, Fred M.; Boston, Mass.; Seaside
Gould, William; Boston, Mass.; Haddon Hall
Grant, A. W., Jr.; St. Paul, Minn.; Traymore
Gordon, R. A.; Pawtucket, R. I.; Chalfonte
Gifford, N. W.; East Boston, Mass.; Haddon Hall
Goodman, Patrick; Brooklyn, N. Y.; Breakers
Gallagher, R. W.; Cleveland, O.; Traymore
German, Wm. H.; Harrisburg, Pa.; Haddon Hall
Greene, J. J.; New York City; Shelburne
Gose, J. F.; Winchester, Va.; Richmond
Graveley, Richard C.; Sag Harbor, N. Y.; Chalfonte
Griswold, Robert G.; New York City; Traymore
Graf, Carl H.; Albany, N. Y.; Traymore
Gill, W. Herbert; Washington, D. C.; Haddon Hall
Guitteau, W. S.; New York City; Traymore
Garvin, A. E.; St. Louis, Mo.; Breakers
Gamnon, John J.; St. Augustine, Fla.; Strand
Gefvert, Chas. J.; New York City; Dennis
Gross, Herbert C.; Pensacola, Fla.; Traymore
Gehnrich, Chas. L.; Long Island, N. Y.; Chalfonte
Gilbert, Frank T.; New York City; Chalfonte
Guinan, W. P.; New York City; Traymore
Gardner, P. D.; Bayonne, N. Y.; Strand
Gardner, B. H.; Lafayette, Ind.; Ambassador
Gatehouse, Geo. W.; Brooklyn, N. Y.; St. Charles
Gavett, Blaine; Grand Rapids, Mich.; Dennis
Griggs, Edward R.; Paterson, N. J.; Haddon Hall
Grace, T. E.; Suffolk, Va.; Haddon Hall
Groce, Joseph B.; Boston, Mass.; Traymore
Gocke, Frank M.; Chicago, Ill.; Ambassador
Geffine, L. W.; Boston, Mass.; Haddon Hall
Grey, Chester; Lansing, Mich.; Traymore
Graham, F. G.; New Rochelle, N. Y.; Wiltshire

H

Henning, H. W.; Jersey City, N. J.; Strand
Hurlburt, Alfred; Pittsburgh, Pa.; Traymore
Housel, James L.; South Amboy, N. J.; Strand
Hirst, H. T.; Chicago, Ill.; Ambassador
Hemminger, G. R.; Philadelphia, Pa.; Brighton
Herring, Paul W.; Chicago, Ill.; Ambassador
Hill, Herbert E.; Newark, N. J.; Strand
Hauschildt, Carl J.; Davenport, Ia.; Breakers
Harbison, Chas.; Lancaster, O.; Strand
Huber, Frank; Louisville, Ky.; Seaside
Hutcheson, H. F.; Toronto, Canada; Dennis
Holmes, Herbert M.; Philadelphia, Pa.; Traymore
Howard, A. C.; New York City; Shelburne
Howell, Alfred E.; Sommerville, N. J.; Marlborough
Hall, A. H.; New York City; Traymore
Herrell, Lee L.; Washington, D. C.; Haddon Hall
Henry, H. M.; Pittsburgh, Pa.; Traymore
Howe, F. G., Jr.; Waltham, Mass.; Chalfonte
Hoffman, Howard; Philadelphia, Pa.; Seaside
Hiddleson, W. A.; Bristol, Tenn.; Traymore
Hildenbrand, R. T.; Pueblo, Col.
Hoy, Chas. W.; Glassboro, N. J.; St. Charles
Hoffman, Chas. L.; Reading, Pa.; Strand
Haddock, Isaac T.; Cambridge, Mass.; Traymore
Halley, Alexander A.; Mt. Vernon, N. Y.; Chalfonte
Hills, A. Stedman; Washington, D. C.; Strand
Halverson, H. P.; Boston, Mass.; Traymore
Haftenkamp, J. P.; Rochester, N. Y.; Chalfonte
Hubbs, J. H.; Philadelphia, Pa.; Haddon Hall
Hall, Isaac S.; Boston, Mass.; Chalfonte
Hanlan, James P.; Newark, N. Y.; Strand
Halch, K. P.; Boston, Mass.; Seaside
Holson, Warren; Georgetown, Del.
Hitz, G. Edw.; Poughkeepsie, N. Y.; St. Charles
Humphreys, J. J.; Montreal, Canada; Ritz-Carlton
Hungerford, Burton A.; Chicago, Ill.; Breakers
Harrison, C. A.; Denver, Col.; Traymore
Hale, Woodbury; Boston, Mass.; Haddon Hall
Hagginbothom, W. K.; Catskill, N. Y.; Chalfonte
Howie, Gordon G.; Cambridge, Mass.; Ritz-Carlton
Happer, Thos. B.; Washington, D. C.; Haddon Hall
Hay, S. F.; Newark, N. J.; Traymore
Hawks, Arthur W.; Baltimore, Md.; Dennis
Howard, Kennith W.; New York City; Bothwell
Holden, Thos. F.; Washington, D. C.; Haddon Hall
Haight, W. H.; Hackensack, N. Y.; Strand
Hancock, John W.; Lynchburg, Va.
Henderson, C. T.; Cleveland, O.; Ritz-Carlton
Hergesheimer, G. M.; Philadelphia, Pa.; Strand
Harding, D. G.; York, Pa.; Bothwell
Hinman, Walter H.; Stamford, Conn.; Traymore
Hoddick, V. C.; Rochester, N. Y.; Chalfonte
Hulswit, John A.; Grand Rapids, Mich.; Ambassador
Hutchings, James T.; Philadelphia, Pa.; Traymore
Heebner, Chas. K.; Philadelphia, Pa.; Traymore
Hutchinson, Frank R.; Cleveland, O.; Ritz-Carlton
Hawsman, G. M.; Atlanta, Ga.; Traymore
Halsey, W. M.; Newark, N. J.; Dennis
Holman, H. B.; St. Louis, Mo.
Hutchinson, W. P.; Bridgeport, Conn.; Traymore
Haase, E.; Milwaukee, Wis.; Haddon Hall
Hill, J. E.; Lincoln, Neb.; Breakers
Clark, Horace H.; Chicago, Ill.; Haddon Hall
Hill, Chas. J.; Chicago, Ill.; Ambassador
Hollingshead, E. D.; Newark, N. J.; Dennis
Hale, R. J.; Creensboro, N. C.; Ambassador
Holzer, E. G.; Norfolk, Va.; Glaslyn-Chatham
Hurley, J. R.; Cincinnati, O.; Breakers
Hart, Julian G.; Waukegan, Ill.; Ritz-Carlton
Horning, Geo. R.; Salt Lake City, Utah; Dennis
Harriman, B. D.; New Bern, N. C.; Shelburne
Hewitt, Arthur; Toronto, Canada; Seaside

I

Ilhenny, John D.; Philadelphia, Pa.; Brighton
Ikena, Frederick J.; Baltimore, Md.; Breakers

J

Jeffrey, Joseph; Scranton, Pa.; Ambassador
Johnson, G. M.; South Bend, Ind.; Traymore
Jones, Edw. DuBose; Brooklyn, N. Y.; Chalfonte
Jones, Jacob B.; Bridgeton, N. J.; Normandie
Jones, William A.; New York City; Traymore
Jasper, H. R.; Brooklyn, N. Y.; Strand
Jackson, Raymond G.; Elizabeth, N. J.; Chalfonte
Johns, Wade H.; New Brunswick, N. J.; Strand
Jardine, D. W.; Burlington, Vt.; Ambassador
Johnson, F. M.; Westerly, R. I.; Chalfonte
Johnson, John W.; Woburn, Mass.; St. Charles
Jenkins, Albert F.; Mt. Vernon, N. Y.; Traymore
Jobes, Henry; Camden, N. J.; Haddon Hall
Johnson, W. B.; Toronto, Canada; Haddon Hall
Johnson, Jesse L.; Providence, R. I.; Haddon Hall
Jameson, M.; Detroit, Mich.; Brighton
Johnson, Ernest; Syracuse, N. Y.; Traymore
Jones, Albert A.; Brooklyn, N. Y.; Raleigh
Johnson, B. Kay; East Orange, N. J.; Mullica

K

Kiefer, Frederick; Wilmington, Del.; St. Charles
Kennedy, W.; New York City; Breakers
Kersting, A. F.; Raleigh, N. C.; Knickerbocker
Kallstedt, C. H.; Chicago, Ill.; Strand
Keppelman, John H.; Reading, Pa.
Kurtz, A.; Detroit, Mich.; Traymore
Kifer, E. H.; San Antonio, Tex.; Traymore
Klein, A. C.; Boston, Mass.; Haddon Hall
Kuhn, Edward J.; Poughkeepsie, N. Y.; Traymore
Kirkham, Henry P.; Brooklyn, N. Y.; Dennis
Klees, Albert L.; New York City; Traymore
Kubo, Shosuke; Kobe, Japan; Ambassador
Kain, Robt. E.; Ardmore, Pa.; Strand
Knapp, Kennith R.; Philadelphia, Pa.; Iroquois
Karr, Fred.; New York City; Traymore
Kelly, Thos. J.; Ft. Wayne, Ind.; Breakers
Kolbe, John Gas.; Richmond, Va.; Seaside
Kuox, Raymond S.; Long Branch, Traymore
Kenyon, Otia A.; New York City; Shelburne
Krausse, Chas. C.; Baltimore, Md.; Haddon Hall
Keller, Albert R.; Syracuse, N. Y.; Traymore
Kane, M. L.; Atlanta, Ga.; Traymore
Kanwisher, Walter; Baltimore, Md.; Brighton
Kenney, Andrew J.; Long Island City, N. Y.; Morton
Kent, Charles Z.; West Orange, N. J.; Haddon Hall
Kent, E. G.; Hoboken, N. J.; Strand
Killgore, Jas. N.; Newark, N. J.; Strand
Kindley, Geo. F.; Baltimore, Md.; Breakers
Koehler, Robert A.; Newark, N. J.; Strand
Kniskern, W. J.; Schenectady, N. Y.; Marlborough
Karshner, G. M.; New York City; Traymore
Kingsbury, C. G.; New York City; Knickerbocker
Kidd, J. H. Y.; Poughkeepsie, N. Y.; Chalfonte
Kahn, Albert M.; Hamilton, O.; Traymore

L

Latch, Wm. R.; Burlington, N. J.; Strand
Lake, H. G.; Mechanicville, N. Y.; Princess
Luther, F. E.; Chicago, Ill.; Ambassador
LeHart, J. S., Jr.; Newark, N. Y.; Traymore
LeClair, Charles; Peekskill, N. Y.; Chalfonte
Lathrop, F. A.; Chicago, Ill.; Strand
Levan, Daniel H.; Savannah, Ga.; Strand
Lloyd, Howard M. J.; Philadelphia, Pa.; Breakers
Lasher, C. A.; Kingston, N. Y.; Chalfonte
Lewis, Raymond C.; Brooklyn, N. Y.; Corinthia
Learned, Charles A.; Meriden, Conn.; Traymore
Linton, S. E.; Nashville, Tenn.; Traymore
Lawrence, James; New York City; Traymore
Lydecker, F. A.; Newark, N. J.; Haddon Hall
Leckie, R. R.; Kingston, N. Y.; Chalfonte
Lasher, Chas. A.; Kingston, N. Y.; Chalfonte

Learned, Waldo A.; Newton, Mass.; Haddon Hall
Lisman, O. C.; Brunswick, Ga.; Shelburne
Loudemann, Albert V.; New York City; Strand
Lawson, W. H.; Ruthland, Vt.; Ambassador
Learned, John C.; Chicago, Ill.; Traymore
Lawton, Frank B.; Newport News, Va.; Ambassador
Lecoque, James C.; Newark, N. J.; Strand
Leech, Wm. A., Jr.; Montclair, N. J.; Haddon Hall
Ling, Benj. E.; Cleveland, O.; Ambassador
Lunn, Chas. Albert; New York City; Haddon Hall
Lyons, B. C.; East Orange, N. J.; Haddon Hall
Lowell, G. C.; Chicago, Ill.; Ambassador
Landers, Ray E.; Tonawanda, N. Y.; Traymore
Luther, Charles A.; Chicago, Ill.; Ambassador
Lacey, W. R.; Milwaukee, Wis.; Strand
LaKamp, Mr.; Cincinnati, O.; Breakers
Long, L. M.; Memphis, Tenn.; Traymore
Lockwood, Alan E.; New York City; Shelburne
Lafore, P. J.; Boston, Mass.; Seaside
Lytle, Hal M.; Chicago, Ill.; Ambassador
Loebell, Henry O.; New York City; Traymore

M

McLean, George; Dubuque, Ia.; Ritz-Carlton
McGrath, James G.; New York City; Bothwell
McCormick, Geo.; New York City; Brighton
McLane, W. W.; East Orange, N. J.; Haddon Hall
McConnell, Robert W.; Philadelphia, Pa.; Strand
McDonald, Wm. F.; Elmhurst, N. Y.; Chalfonte
MacMorris, Earnest; Philadelphia, Pa.; Strand
McGuire, James; Gloversville, N. Y.; Chalfonte
McGovern, Bernard; Brooklyn, N. Y.; Traymore
McGowan, Henry E.; Brooklyn, N. Y.; Strand
McEwen, W. A.; Philadelphia, Pa.; Strand
McCarthy, A. P.; Bangor, Me.; Traymore
McCleary, Jos. F.; Baltimore, Md.; Shelburne
McGreevy, J. P.; Utica, N. Y.; Traymore
McBeth, G. T.; Mt. Vernon, N. Y.; Chalfonte
McMahon, John J.; Cleveland, O.; Chalfonte
MacMahon, William; Boston, Mass.; Seaside
McCurdy, Henry A.; Boston, Mass.; Seaside
MacArthur, D.; Jersey City, N. J.; Shelburne
McCorkindale, William J.; Roanoke, Va.; St. Charles
McKee, Garnet W.; Rockford, Ill.; Ambassador
McBride, R. S.; Wash., D. C.; Glaslyn-Chatham
MacArthur, Angus; Chicago, Ill.; Shelburne
Marden, C. P.; Orange, N. J.; Haddon Hall
Morgan, Chas. S.; Rochester, N. Y.; New Belmont
Morehouse, H. P.; Newark, N. J.; Strand
Majorm, W. A., Jr.; Palmyra, N. J.; Haddon Hall
Moses, Frank D.; Trenton, N. J.; 1621 Pacific Ave.
Myers, J. B.; Philadelphia, Pa.
Muehlberg, Clarence E.; Denver, Col.; Traymore
Mather, John L.; Wayne, Pa.; Strand
Messenger, J. A.; Philadelphia, Pa.; Traymore
Munroe, Charles A.; Chicago, Ill.; Traymore
Murphy, Edward J.; Brooklyn, N. Y.; Strand
Mouser, Otis; Big Stone Gap, Va.; Brighton
Murdock, W. J.; Joliet, Ill.; Shelburne
Miller, Thos. D.; St. Louis, Mo.; Ritz-Carlton
Miller, E. F.; Merchantville, N. J.; Chalfonte
Mulholland, S. E.; Fort Wayne, Ind.; Breakers
Mickle, J. E.; Media, Pa.; Cheltenham-Revere
Marks, A. A.; Lansdale, Pa.; Bothwell
Mendez, Frank L.; Chester, Pa.; Shelburne
Miller, V. A.; Rochester, N. Y.; Chalfonte
Maddux, Oliver L.; Kingston, N. Y.; Breakers
Merchant, O. A.; Amsterdam, N. Y.; Traymore
Mullarkey, J. J.; Camden, N. J.; Strand
Moss, W. E.; Detroit, Mich.; Ambassador
Moore, J. H.; New York City; Shelburne
McGown, C. Y.; New York City; St. Charles
Merchant, A. E.; New Orleans, La.
Myer, H. H.; New York City
Martin, Raymond M.; New York City
Mason, Harold E.; Long Branch, N. J.
Merkt, T. B. J.; Brooklyn, N. Y.; Strand
Merrifield, Wm.; New York City; Traymore
Miller, Wm. A.; Cincinnati, O.; Ritz-Carlton
Morrous, O. A.; Astoria, N. Y.; Haddon Hall
Morris, W. R.; Jersey City, N. J.; Shelburne
Munroe, William V.; New York City; Bothwell
Murdoch, Prescott; Jackson, Mich.; Ambassador
Murphy, J. B.; White Plains, N. Y.; Chalfonte
Murray, Francis X.; New York City; Bothwell
Merrill, Harry; Tonawanda, N. Y.; Traymore
Murphy, F. D.; Houston, Tex.; Ritz-Carlton
Moore, S. H.; Chicago, Ill.; Ambassador
McPhail, R.; Traymore
Martell, W. H.; Austin, Minn.; Knickerbocker
Manier, R. L.; Syracuse, N. Y.; Chalfonte
McMinn, John E.; Louisville, Ky.; Stanton
Mullaney, Bernard J.; Chicago, Ill.; Ambassador
McKana, George E.; Chicago, Ill.; Ambassador
Middleworth, Henry V.; New York City; Traymore
Mix, Martin I.; Chicago, Ill.; Ambassador
Mackie, A. D.; Springfield, Ill.; Ambassador
Mears, F. K.; Philadelphia, Pa.; Strand
Meyer, A. J.; Yonkers, N. Y.; Breakers
Moore, L. L.; Philadelphia, Pa.; Traymore

N

Nielsen, W. W.; Springfield, Mo.; Chelsea
Neal, George A.; Philadelphia, Pa.; Traymore
Nute, Jos. E.; Fall River, Mass.; Chalfonte
Nettles, Roscoe; Tampa, Fla.; St. Charles
Nason, Jos. E.; Erie, Pa.; Marlborough
Norcross, J. Arnold; New Haven, Conn.; Traymore
Nettleton, Chas. H.; Derby, Conn.; Traymore
Norton, Walter F.; Nashua, N. H.; Haddon Hall
Norton, Arthur E.; Boston, Mass.; Haddon Hall
Nichols, W. E.; South Bend, Ind.; Traymore
Noble, J. A.; Lockport, N. Y.; Traymore
North, M. F.; Ft. Wayne, Ind.; Breakers
Neely, Ira L.; Wooster, O.
Nelson, J. M.; Barre, Vt.; Ritz-Carlton
Newman, H. H.; Trenton, N. J.; Chalfonte
Nicholson, Henry W.; Newark, N. J; Strand
Norris, Rollin; Philadelphia, Pa.; Traymore
Morris, Warren A.; Glassboro, N. J.; Traymore
Neth, John A.; Tarrytown, N. Y.; Bothwell
Nichols, J. C.; Bluefield, W. Va.; Haddon Hall
Newberry, Frank E.; Brooklyn, N. Y.; Ritz-Carlton
Nutting, Paul J.; Toledo, O.; Ambassador

O

O'Brien, Brenard; New York City; Traymore
O'Donnell, Charles J.; Philadelphia, Pa.; Traymore
O'Donnell, W. F.; Philadelphia, Pa.; Haddon Hall
O'Brient, Earl J.; Toledo, O.; Ambassador
O'Dowd, H. W.; Jersey City, N. J.; Chalfonte
Osterman, P. C.; Elizabeth, N. J.; Strand
Otterbein, G. J.; Cedar Rapids, Ia.

P

Parr, Samuel W.; Urbana, Ill.; Traymore
Pettingell, Andrew F.; Cambridge, Mass.; Breakers
Piatt, Joseph W.; Brooklyn, N. Y.; St. Charles
Porter, Horace C.; Philadelphia, Pa.; Eastbourne
Postles, J. Van G.; Philadelphia, Pa.; Haddon Hall
Potter, N. H.; Paterson, N. J.; Strand
Phillips, A. I.; New York City; Runnymede
Pruden, Andrew; Rutherford, N. J.; Strand
Parke, Fred. B.; Brooklyn, N. Y.; St. Charles
Prezzano, Ed. P.; New York City; Traymore
Pratt, Ed.; Chicago, Ill.; Strand
Polk, Roger W.; Chicago, Ill.; Traymore
Purcell, Theo. V.; Chicago, Ill.; Ambassador
Paffen, Peter; Boston, Mass.; Traymore
Paige, Clifford E.; Boston, Mass.; Traymore
Peterson, Carl G.; Providence, R. I.; Traymore
Phillips, C. B.; Toledo, O.; Ambassador
Pettey, R. A.; New Bedford, Mass.; Haddon Hall
Price, Charles R.; New Bedford, Mass.; Haddon Hall
Post, A. P.; Philadelphia, Pa.; St. Charles
Pratt, V. E.; New York City; Shelburne
Price, Otto; Quincy, Mass.; Haddon Hall
Pfeiffer, Bernard V.; Philadelphia, Pa.; Traymore
Perry, J. A.; Philadelphia, Pa.; Traymore
Parker, J. S.; Philadelphia, Pa.; Seaside
Parmelee, Le Roy D.; Albany, N. Y.; Craig Hall
Platt, C. W.; Portland, Ore.; Ambassador
Prichard, Charles R.; Lowell, Mass.; Traymore
Phillips, L. W.; Lebanon, Pa.; Traymore
Plantinga, P.; Cleveland, O.; Traymore
Pruyn, Robert S.; Mt. Vernon, N. Y.; Chalfonte
Porter, R. G.; Chester, Pa.; Traymore
Palmer, R. H.; Port Chester, N. Y.; Marlborough
Plain, Morse Dell; Hammond, Ind.; Traymore
Porter, Edw.; Philadelphia, Pa.; Brighton
Patterson, F. H.; Rochester, N. Y.; Chalfonte
Presbrey, R. S.; Rochester, N. Y.; Seaside
Patten, J. A.; Elkhart, Ind.; Ritz-Carlton
Parish, Wm. H.; Philadelphia, Pa.; Traymore
Powell, Alfred L.; Pittsburgh, Pa.; Traymore
Porter, Wm. N.; Philadelphia, Pa.; Strand
Piser, Theo. H.; Boston, Mass.; Haddon Hall
Potter, Henry W.; Burlington, Ia.; Breakers
Perry, L. P.; Poughkeepsie, N. Y.; Chalfonte
Pipkin, J. E.; St. Louis, Mo.; Breakers
Pichard, B. F.; Greensboro, N. C.; Ambassador

Q

Quackenbush, C. H.; Wilmington, Del.; St. Charles
Quinn, John J.; Quincy, Mass.; St. Charles
Quinn, J. F.; Brooklyn, N. Y.; Strand

R

Reiners, Bernard F.; Newark, N. J.; Strand
Rollins, Stephen R.; Baltimore, Md.; Haddon Hall
Roberts, John M.; Chicago, Ill.; Ambassador
Rogers, William G.; Cleveland, O.; Strand
Ramsay, Robert E.; Philadelphia, Pa.; Strand
Ransdell, D. D.; Washington, D. C.; Haddon Hall
Ripley, E. F.; East Orange, N. J.; Shelburne
Rosenkrans, F. M.; New York City; Traymore
Roberts, Geo. L.; Bristol, Conn.; Shelburne
Richardson, H. Edward; Philadelphia, Pa.; Strand
Rieha, Edward L.; Baltimore, Md.; Haddon Hall
Russell, Walter A.; Boston, Mass.
Rawlins, F. W.; Norristown, Pa.; Traymore
Raabe, Chas.; Long Island, N. Y.; Haddon Hall
Ruthledge, F. J.; Philadelphia, Pa.; Traymore
Rudd, W. G.; Chicago, Ill.; Ambassador
Reed, Geo. E.; Bound Brook, N. J.; Strand
Rother, Chas. O.; Buffalo, N. Y.; States Villa
Ramage, J. R.; Louisville, Ky.; Shelburne
Ramsburg, C. J.; Pittsburgh, Pa.; Brighton
Ramsey, John J.; New York City; Bothwell
Richman, H. H.; Philadelphia, Pa.; Knickerbocker
Riseley, C. W.; Jersey City, N. J.; States Villa
Roeser, Chas. J.; Brooklyn, N. Y.; Seaside
Ryder, D. R.; Jersey City, N. J.; Strand
Robbins, M. C.; New York City; Traymore
Rossman, W. F.; Brockton, Mass.; Chalfonte
Quinn, J. K.; Newport, R. I.; Haddon Hall
Abner Ratner, Camden, N. J.
Rodgers, Arthur B.; Norwood. Mass.; Clarenden
Rusby, J. M.; Philadelphia, Pa.; Traymore
Rhodes, A. C.; Mansfield, O.; Traymore
Reinhard, S. A.; Philadelphia, Pa.
Reichel, Mr.; Cincinnati, O.; Breakers
Ross, S. R.; Philadelphia, Pa.; Chalfonte
Ruegenber, J. M.; Philadelphia, Pa.; Traymore

S

Scott, Perley M. S.; Boston, Mass.; Traymore
Smith, John C.; Reading, Pa.; Strand
Shattuck, John D.; Chester, Pa.; St. Charles
Short, Arthur F.; Providence, R. I.; Haddon Hall
Shattuck, J. D.; Chester, Pa.; St. Charles
Schroeder, Fred; Long Island, N. Y.; St. Charles
Schoommaker, W. L.; Patterson, N. J.; Haddon Hall
Sherwood, M. S.; Summit, N. J.; Strand
Smith, G. E.; Jersey City, N. J.; Strand
Schafer, F. J.; Los Angeles, Calif.; Traymore
Smith, E. L.; Towanda, Pa.; Traymore
Schanze, A. G.; Washington, D. C.; Haddon Hall
Scranton, Geo. H.; Derby, Conn.; Traymore
Stewart, W. D.; Rall River, Mass.; Chalfonte
Shevlin, Edward B. Albany, N. Y.; Craig Hall
Stiles, George W.; Portland, Me.; Haddon Hall
Schreiner, Henry, Brooklyn, N. Y.; Bothwell
Serrill, Wm. J.; Philadelphia, Pa.; Traymore
Sexton, W. E.; Baltimore, Md.; Strand
Sherman, S. R.; Racine, Wis.; Traymore
Speer, Jr., F. W.; Pittsburgh, Pa.; Traymore
Stockton, H. A.; Atl. Highlands, N. J.; Monticello
Shields, Edward J.; Brooklyn, N. Y.; Stanton
Shields, Frank J.; New Haven, Conn.; Strand
Stinemire, W. H.; Poughkeepsie, N. Y.; St. Charles

Schlegel, Carl A.; Philadelphia, Pa.; Traymore
Smith, J. C.; Stapleton, S. I. L.; Haddon Hall
Shankland, C. M.; Ann Arbor, Mich.; Ritz
Simons, K. L.; El Paso, Texas; Breakers
Scott, Charles; Toronto, Canada, Dennis
Seely Harold K.; hPliadelphia, Pa.; Strand
Scheller, J. A.; Newark, N. J.; Dennis
Steinwedell, W. E.; Cleveland, O.; Traymore
Seely, E. J.; Kansas City, Mo.; Chalfonte
Sutton, H. Craig; Philadelphia, Pa.; Traymore
Schuetz, Albert A.; Milwaukee, Wis.; Haddon Hall
Smith, Louis T.; Milwaukee, Wis.; Haddon Hall
Shearon, B. P.; Hammond, Ind.; Chalfonte
Squier, Harold N.; Scranton, Pa.; Ambassador
Simmons, Frank K.; Woonsocket, R. I.; Chalfonte
Semard, C. A.; Cheyenne, Wyo.; Traymore
Shiebler, Marvin; New York City, Traymore
Sterrett, Wm. G.; Chester, Pa.; Traymore
Stannard, Clare N.; Denver, Col.; Traymore
Stall, Alfred W.; Kingston, N. Y.; Breakers
Sawyze, N. T.; Newton, Pa.; Clarendon
Strickler, T. J.; New York City; Traymore
Smith, W. L.; Battle Creek, Mich.; Traymore
Selke, A. F.; Newburgh, N. Y.; Chalfonte
Schaeffer, W. L.; Pittsburgh, Pa.; Haddon Hall
Schreck, M. G.; Ridgewood, N. J.; Strand
Schutt, H. S; Philadelphia, Pa.; Traymore
Scott, John J.; Lewiston, Me.; St. Charles
Smith, Dorsey R.; Baltimore, Md.; Brighton
Smith, Ernest L.; St. Paul, Minn.; Traymore
Smith, Geo. H.; Poughkeepsie, N. Y.; Chalfonte
Spindle, J. E.; Grand Rapids, Mich.; Ambassador
Starzenski, V.; Schenectady, N. Y.; Marlborough
Stephany, E. J.; Pittsburgh, Pa.; Traymore
Stevens, Chas. A.; Westfield, N. J.; Haddon Hall
Stone, C. H.; Rochester, N. Y.; Chalfonte
Strain, G. A.; Ithaca, N. Y.; Traymore
Sykes, W. C.; Rochester, N. Y.; Chalfonte
Sheldon, R. H.; Brockton, Mass.; Chalfonte
Steinwedell, Geo.; Muskegon, Mich.; Ambassador
Schafer, E. E.; Moline, Ill.; Ambassador
Sanford, H. S.; Pittsburgh, Pa.; Ambassador
Schaaf, A. H.; Brooklyn, N. Y.; St. Charles
Sherwood, Herbert; Mt. Vernon, N. Y.; Bothwell
Strause, Harry; Philadelphia, Pa.; Traymore
Schenker, A. W.; Brooklyn, N. Y.; Traymore
Stone, C. H.; Rochester, N. Y.; Chalfonte
Smith, A. J.; Concord, N. H.; Barlborough
Shanley, Wm. P.; Norwich, Conn.; Morton
Stang, Geo. H.; Coney Island, N. Y.; Shelburne
Sauer, William A.; Chicago, Ill.; Ambassador
Stein, Louis; Eau Claire, Wis.; Traymore
Smyly, Arthur L.; Chicago, Ill.; Ambassador
Schnerr, C. A.; Chicago, Ill.; Ambassador
Smith, H. H.; Boston, Mass.; Chalfonte
Stallings, J. T.; Elizabeth City, N. C.; Clarendon
Smart, Burton; Portland, Me.; Haddon Hall
Sweatt, Charles; Minneapolis, Minn.; Ritz-Carlton
Smith, J. H.; Philadelphia, Pa.; Strand
Seybolt, E.; Portsmouth, N. H.; Breakers
Swartz, N. B.; Mount Carmel, Pa.; Clarendon

T

Turner, Lyle; Cleveland, O; Strand
Taylor, A. C.; Reading, Pa.; Strand
Taggart, Chas. W.; Norwich, Conn.; Breakers
Traugott, J. M.; Philadelphia, Pa.; Traymore
Travis, Geo. W. L.; New York City; Haddon Hall
Turk, H.; Baltimore, Md.; Haddon Hall
Trump, R. W.; Philadelphia, Pa.; Brighton
Tucker, E. J.; Toronto, Ont., Canada; Dennis
Traver, Alva F.; New York City; Traymore
Thompson, Paul; Philadelphia, Pa.; Haddon Hall
Tierney, J. W.; St. Charles, Mo.; Breakers
Tatman, J. S.; Connersville, Ind.; Raleigh
Taussig, J. H.; Philadelphia, Pa.; Traymore
Taussnig, J. H.; Philadelphia, Pa.; Traymore
Trafford, E. W.; Richmond, Va.; Ritz
Tudbury, J. L.; Salem, Mass.; Haddon Hall
Tansey, Frank D.; Brooklyn, N. Y.; Traymore
Terhuce, Ralph D.; Hackensack, N. J.; Bothwell
Tuteur, Irving M.; Chicago, Ill.; Traymore
Tossell, Albert L.; Chicago, Ill.; Ambassador

U

Uhlig, Edward C.; Brooklyn, N. Y.; Strand
Underhill, H. L.; Baltimore, Md.; Haddon Hall
Underhill, Reginald; Brooklyn, N. Y.; St. Charles
Ulbright, Emil; Newark, N. J.; Haddon Hall

V

Von Maur, J. D.; St. Louis, Mo.; Ritz
Vandell, Wm. E.; Fitchburg, Mass.; Traymore
Vandell, W. E.; Fitchburg, Mass.; Traymore
Voderberg, H. M.; Toledo, O.; Traymore
Vredenburgh, F. W.; Newburgh, N. Y.; Chalfonte
Valentine, H. D.; Chicago, Ill.; Ambassador
Vandervere, Jane Gray; Cleveland, O.; Strand
Vivian, W. S.; Chicago, Ill.; Traymore
Van Brunt, R. J.; Newark, N. J.; Ambassador

W

Watson, B. S.; New York City; Traymore
Wilder, E. L.; Rochester, N. Y.; Chalfonte
Wagner, Herbert L.; Lockport, N. Y.; Traymore
White, Lysander T.; Danbury, Conn.; Traymore
Wilson, Percival A.; Philadelphia, Pa.; Brighton
Whitcomb, H. D.; Newark, N. J.; Brighton
Woodhead, F. A.; Arlington, Mass.; St. Charles
Wilson, Jr., L. B.; Baltimore, Md.; Dennis
Warner, Harry; Salina, Kan.; Traymore
Whrle, Geo.; Denver, Col.; Traymore
Whittaker, Frederic S.; Philadelphia, Pa.; Strand
Windle, Ernest G.; Philadelphia, Pa.; Haddon Hall
Williams, L. S.; Harrisburg, Pa.; Ritz-Carlton
Wagner, Geo. F.; Lowell, Mass.; Traymore
Williams, T.; Sioux City, Ia.; Strand
Waldron, J. H.; Brooklyn, N. Y.; Haddon Hall
Weber, Theodore G.; New York City; Chalfonte
Wetzel, C. E.; Philadelphia, Pa.; Colton Manor
Winterstein, C. C.; Philadelphia, Pa.; Traymore
Wharton, Frank D.; Syraucuse, N. Y.; Breakers
Weber, F. C.; New York City; Ritz-Carlton
Way, Wm. B.; Pittsburgh, Pa.; Traymore
Webber, M. B.; Boston, Mass.; Ritz-Carlton
Wing, John F.; Boston, Mass.; Haddon Hall
Wehrle, George; Denver, Col.
Wilson, H. A.; Newark, N. J.; Traymore
Wharton, Henry; Phila., Pa.; Sea View Golf Club
White, Howard E.; Bridgeport, Conn.; Breakers
Whipple, Robt. H.; Philadelphia, Pa.; Traymore
Warner, A. W.; Chester, Pa.; Traymore
Wohrley, J. R.; New York City; Traymore
Waddington, C. W.; Brooklyn, N. Y.; St. Charles
Wehnert, H. C.; St. Louis, Mo.; St. Charles
Wyer, Sam S.; Columbus, O.; Breakers
Weak, C. H.; Philadelphia, Pa.; 2001 Atlantic Ave.
Yeomans, B. B.; Rochester, N. Y.; Chalfonte
Young, H. B.; Chicago, Ill.; Traymore
Wahl, Edward; Baltimore, Md.; Brighton
Walsh, E. V.; West New York, N. J.; Strand
Walsh, Wm. M.; Schenectady, N. Y.; Barlborough
Ware, Leon H.; Martinsburg, W. Va.; Iroquois
Washburn, R D.; Boston, Mass.; Chalfonte
Washer, O. R.; Morristown, N. J.; Strand
Watson, H. E. G.; Toronto, Canada
Watson, Zerah E.; Brooklyn, N. Y.; Haddon Hall
Weiss, J. M.; New York City; Ambassador
Wells, H. H.; Newark, N. J.; Haddon Hall
Weymouth, Thos. R.; Buffalo, N. Y.; Ambassador
Whalen, Thos. J.; New York City, Bothwell
Wilson, W. J.; New York City; Bothwell
Walsh, E. V.; West New York, N. J.; Strand
Whetstone, Walter; Philadelphia, Pa.
Wilson, D. W.; Orchard Park, N. Y.; Ambassador

X

Xylander, Peter; Hackensack, N. J.; Strand

Y

Yeaton, G. D.; Providence, R. I.; Traymore
Young, A. W.; Knoxville, Tenn.; Traymore
Yard, Willis S.; San Francisco, Calif.; Marlborough
Young, Alvah W.; Ossining, N. Y.; Dennis
Young, J. M. H.; London, Ont., Canada
Young, D. J.; Tacoma, Wash.; Sea View Club

Z

Zander, John, Chicago, Ill.; Ambassador
Zitzewitz, Herman; Chicago, Ill.; Ambassador
Zingg, Julius; Newark, N. J.; Haddon Hall
Ziebell, L. P.; Wisconsin; Ritz-Carlton
Zinke, F. J.; Lorain, Ohio; Shelburne
Zingg, J. P.; Orange, N. J.; Strand
Zeek, R. N.; Michigan City, Ind.; Chalfonte

TODAY'S HAPPENINGS

Time	*Place*	*Event*
9.30 A. M.	Staff Headquarters	Staff Meeting
10.00 A. M.	Convention Hall	Second General Session
2.00 P. M.	Vernon Room, Haddon Hall	Accounting Section
	Auditorium	Commercial Section
	Room 20, 1st Floor, Chalfonte Hotel	Industrial Gas Section
	Room 17, 1st Floor, Chalfonte Hotel	Publicity and Advertising Section
	Convention Hall	Technical Section
	Haddon Hall	Chemical Committee
3.00 P. M.	Submarine Grill, Traymore	Ladies' Tea and Card Party
6.45 P. M.	Club Room, Traymore	Commissioner Jackson's Dinner to Commissioners and Past Presidents
8.00 P. M.	Rose Room, Traymore	Public Relations Symposium

House Heating Business

House heating by gas in sight—Particularly well adapted to hot air system—Reduction of heat has improved installation

G. I. Vincent

Manager, Syracuse Lighting Co., New York, N. Y.

Economic conditions are shaping themselves to make it certain that house heating business will come to the gas company, whether it wants it or not. The business must be economical for the customer and profitable to the gas company. The hot air system lends itself best to conversion from coal firing into gas firing. The heat losses will depend on the construction of the dwelling and the nature of the heating equipment. Both can be modified so as to reduce these losses to a minimum.

These were the main points brought out in a paper read before the Tuesday meeting of the Commercial Section of the American Gas Association, assembled in Convention at Atlantic City.

FROM a recent number of a magazine, which, it is said, is read by ten million people, I quote the following:

"In the near future when gaseous fuel alone is used in our homes, the cellar instead of being a dusty, dirty, wasted space will be as clean as the living room above and will be furnished and used for billiards or even for a more profitable purpose."

But not long ago, a man high up in our industry, whose opinion on any subject would be most valuable, stated informally that unless some means could be found to prevent the use of gas for total house heating the industry would be in a bad way.

In a scholarly rate study, which it has recently been my privilege to read, I note that it is proved beyond question that in a normal, well operated gas company, house heating gas, if sold on a per M basis, would have to bring at least twenty-five per cent (25%) more than the same quantity sold to a customer with a good load factor.

But I am credibly informed that some gas utilities south of the Mason and Dixon line make much of their living upon their house heating load which, obviously, has a much poorer load factor than would obtain in the northern belt.

Surely, we have here enough anomalies to make us wonder whether we know anything about this house heating business. I venture to say that if an intelligent layman studied all our data, he would find himself between the devil and the deep blue sea and, apparently, the large majority of us engaged in the industry are in little better case.

House Heating By Gas In Sight

Now, personally, I do not know very much about house heating. I have never made any experiments to speak of and I have read only very sketchily the profound dissertations which have appeared on the subject from time to time. But I am impressed with the fact that total house heating with gas is in sight from the broad economic standpoint, and it behooves the industry to find out how to take it on in the best way possible. In other words, we are going to get it whether we want it or not, because the difference between the cost of gas and the cost of coal has narrowed to the point where it represents perfectly satisfactory compensation to the user for his less trouble and greater comfort. Do not understand me to mean that we are going to receive a wild rush of applicants for total house heating. The inertia of household activities is very great and even active solicitation and demonstration on the part of gas utilities will probably not yield large numbers of total house heating customers immediately. But in my judgment a slow but certain growth is inevitable and I propose to discuss in a very general way just how the problem had best be approached and what seems to be a workable solution at the present time.

And just a word in passing about this inertia business. Those of you who are opposed to total house heating had better not count too much on it to prevent its growth. Truly, it has required a generation to bring the gas range from a curiosity to that degree of necessity that a household is scarcely counted decent without it. But total house heating may accelerate very much faster. The greater luxury is obvious. The personal pride of the owner will be an active prod to his neighbors.

Business Must Be Economical for Customer and Profitable for Company

It is unnecessary to state that to be permanent in our industry, business must be economical for the customer and profitable for the company. But clearly the profit to the company cannot be measured alone by the amount of gas sold and the margin between the burner cost and the selling price. There are other factors and, within limits, some reduction of total consumption by the customer goes hand in hand with increased profit to the utility. Let us pause, therefore, and examine very briefly the rate situation.

To sell gas for house heating on a flat rate, or even a step rate, without suitable protection to the company for its readiness to serve the demand is unwise, both from the standpoint of the company and the customer. It is futile to consider house heating without at least a two-part rate, the first part bearing substantially all the charges that proceed whether any commodity is used or not, and the second part a sliding scale for the commodity. A three-part rate might be even more desirable, but the two-part, as described, will answer. Such a rate

would enable the company to be sure of some return and fixed charges on its equipment throughout the year, and enable it to sell the commodity to the customer at a lower price.

Before explaining why less gas consumption for house heating might be better business, both for the customer and the company, there is another phase of the matter that, at first sight, seems to have very little to do with it—that is, dwelling construction and equipment.

Dwelling Construction and Equipment

Now, it is a fact that over ninety per cent (90%) of the dwellings in this country are heated with hot air. If, therefore, we desire house heating business and must use hot water or steam, we must make up our minds that we must sell about $2,000 worth of equipment per customer. You will agree with me, I think, that this is hopeless. Our real answer is not even to replace the hot air equipment with a new furnace but to modify and add to the present equipment to make it suitable for highly efficient utilization.

To diverge again, has it ever been your privilege to listen to well-informed architects, builders, and other intelligent people discourse on the subject of house heating? You will probably find that approximately nine out of ten will recommend hot water as being superior to hot air. In fact, in all my inquiries, I have yet to find one who would champion hot air against hot water. Giving a dog a bad name largely accounts for this extraordinary error and has led to most ridiculous assertions. For example, an architect once stated to a group of friends that the reason it was impossible to heat the north rooms on the second floor of a dwelling with hot air when the wind was blowing was because the wind forced the hot air back into the pipes! Another quaint assertion was that hot water heating was preferable because it humidified the air! I am probably not quoting anything that many of you have not heard before, or, at least, along the same line.

Advantages of Hot Air System

I can give you a number of very good reasons why hot air is superior to hot water. Understand, I hold no brief for any system, but am simply stating facts and you will note later how nicely these facts fit in with our problem.

First—The first cost of hot air heating is lower.

Second—Registers occupy very much less space than radiators.

Third—The air can be automatically humidified.

Fourth—Using a re-circulating system (and nothing else should be considered) continuous partial sterilization of the air is effected by contact with the very hot surfaces.

Fifth—The lag is shorter than any other system, particularly desirable in a changeable climate.

Combine these five reasons with the fact that hot air heating can be just as efficient as hot water and one is hardly justified in considering anything else.

You will observe that I have not touched on one serious objection to the hot air system, which is the furnace gas leakage and dust. This will only be true in coal-fired furnaces and, of course, need not be true if those furnaces are properly built and kept in proper repair. It will not hold with gas heating. The fact that a hot air system does not heat certain rooms under some conditions has nothing to do with the case. It is simply a matter of proper installation. And, moreover, the design I will show you will largely overcome this drawback.

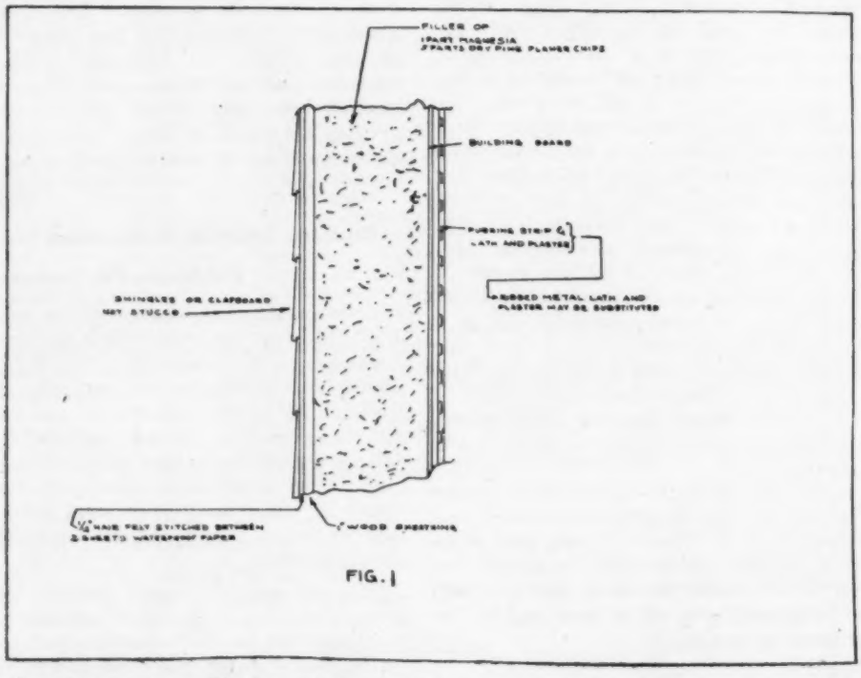


FIG. 1

Heat Loss Data Meager

Now, as to dwelling construction. Those of you who have studied the problem are probably well aware of the meagerness of the data available as to heat losses. It is apparent that little attention has been paid to this important matter, except in relatively few cases where usually there was no real scientific foundation. Here again, we find strange prejudices. I recall hearing an intelligent man state that he would not have double windows in a house because it made the house stuffy. He preferred weather strips! There have been brought to my attention cases where house owners have actually been persuaded to discard their storm windows and have weather strips installed in order to save heat loss!

Dwelling house wall construction is also of interest as illustrating adherence to form regardless of what happens. Have you ever heard the assertion that a hollow tile house is the warmest and that a brick house is warmer than a frame house, etc., etc.? Neither of those statements happen to be true for by a mere accident of building evolution, the well-built frame dwelling probably has a lower heat loss through the outside wall than any other type. But in any standard type of building wall the heat loss is ridiculously high. Here again, I have made no experiments. We have taken what data we could find and applied it.

Perhaps you do not know of the saving made by the complete installation of double windows. Under average conditions, a dwelling completely equipped with double doors and windows would have sixteen per cent (16%) less heat loss than with single. And this can be increased to about 20% by other insulation which can be applied without reconstruction.

In a new dwelling, this figure can be nearly doubled with very modest increase in first cost. Figure 1 shows a cross section of a frame wall construction that is cheap and efficient. Together with double windows and roof or ceiling insulation, it will effect a heat loss saving of about thirty-five per cent (35%). The filling material, which consists of five parts dry pine planer chips, and one part shredded magnesia, is so slow burning as to be practically incombustible.

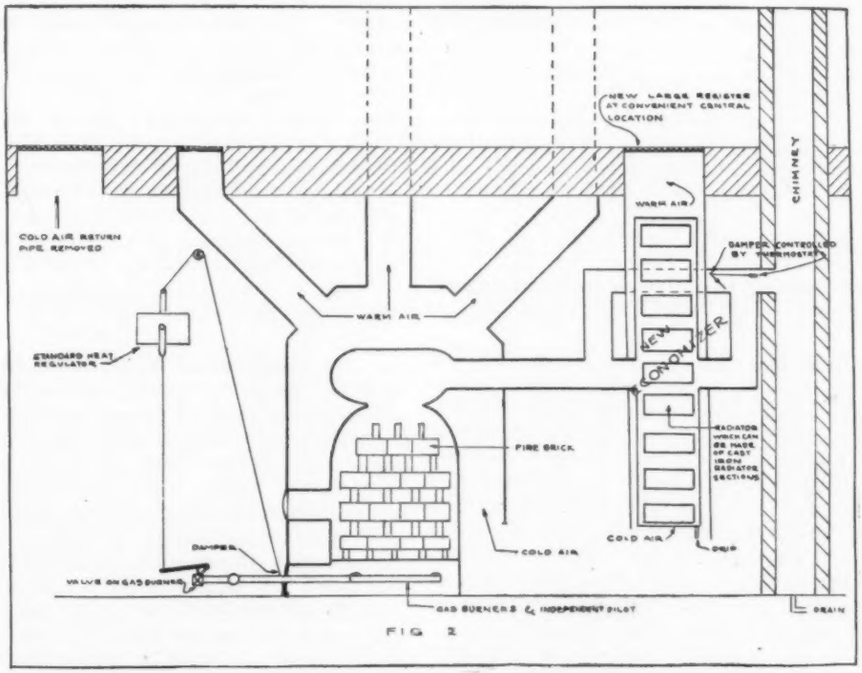


FIG. 2

To cities where frame construction is not permitted, such a design would obviously not apply. But it is illustrative of the point that better dwelling building from the heat loss standpoint is part of our problem and we should interest ourselves in it.

Before leaving the heat loss discussion, it is well to cover the criticism that such construction would vitiate the air by cutting down the leakage. A whole lot of leakage can be eliminated from the normal dwelling without impairing the quality of the air for wholesome breathing. There will be sufficient leakage for normal purposes and when large crowds are assembled additional ventilation is used anyhow. This is true of bedrooms, also, and brings up another point. In converting a house to gas heating, all preventable heat losses should be studied. For example, fireplaces must have dampers. As bedroom windows are usually open at night, the doors should be well fitted and the openings under doors permanently stopped.

The effect of thus reducing the heat loss is to reduce in exact proportion the maximum gas demand. Truly, it will also reduce the consumption but the maximum demand is a very important item

in the cost of carrying total house heating. And without going into details, it can be stated that this reduction in demand will apparently be sufficient compensation to offset the loss in consumption, and both the company and the customer will profit.

And just one further material benefit from reducing heat losses. Drafts in dwellings, particularly floor drafts, are uncomfortable, also a potent cause of diseases of children. Usually drafts are not caused by leakage but by excessive heat loss. Reducing this will reduce the drafts.

Modification of Heating Installation to Reduce Heat Loss

From our discussion thus far, the conclusion can be drawn, even if not proved with scientific accuracy, that, given some satisfactory method of modifying present hot air furnace installation, desirable house heating business should be secured. But our installations should include such modifications as might be necessary to reduce the heat loss in the dwelling and, later, the encouragement of better new building. The modification of the heating equipment is the problem which has interested us the most. Figure 2 shows a design which is now being installed and will come into use next winter.

The figure is diagrammatic and represents any form of hot air furnace from which the grates have been removed and gas burners and checker fire brick installed. The latter is for heat storage only and while this storage is but a nominal amount, it will tend to lengthen the lag. A standard heat regulator controlled by a thermostat at some point in the house controls the burners. The design we are using will have two burners off one header, either or both of which will be lighted from the one pilot. The two burners will be used in the coldest weather and one in the intermediate weather. The balanced valve controlled by the heat regulator will supply gas to the header. The large pilot (about five feet an hour) will be supplied independently.

Air admission to the burners will be worked out to keep the excess air down to the safe minimum. The damper shown closes when the burner is shut off to avoid air by-passing to the chimney and cooling the system. Enough air will be admitted independently to supply the pilot.

Between the furnace outlet and the chimney is installed the economizer, which is to be made of such size that it will take all the available heat out of the products of combustion before discharging to the chimney. To definitely assure this result, a damper on the economizer by-pass is controlled by a thermostat in the chimney inlet. By trial, this thermostat will be set at the lowest temperature at which the chimney will remove the products of combustion.

Difficulty, due to condensation, will be reduced to a minimum because the parts subject to condensation effect will be made of cast iron. The chimney thermostat will be protected in some suitable way. It will probably be necessary to install a drain at the foot of the chimney as shown.

As the basement, with such an installation, will fulfill all the conditions described in the first paragraph of my discussion, it is not necessary to have any cold air return pipes. Those in use can be removed, leaving the opening directly into the basement. Other cold air inlets opening through the floor at strategic points can be made, if necessary. Both the furnace proper and the economizer will then take cold air directly from the basement and discharge it into the house. How much heat is to be allowed to radiate to the basement will have to be determined by trial. The heating will not be satisfactory if the temperature of the basement is allowed to remain more than 15 degrees Fahrenheit below the house temperature.

Addition of Economizer Important

With the addition of the economizer, the average hot air furnace, thus converted from coal to gas, will be a better heating system than it was when using coal. The economizer will discharge a quantity of moderately heated air at some convenient central point while the small pipes on the furnace proper will discharge smaller quantities of higher heated air through the original registers. If the coal furnace did not properly heat with coal, it might be that it will not heat perfectly with gas but, with the proposed design, we can be assured that it will be better with gas than it was with coal, even if it is not one hundred per cent perfect.

Any opening taking cold air from outdoors should be removed and carefully stopped off.

If no satisfactory means of humidifying the air were in the coal furnace, it should be recommended to the customer. There are several automatic systems on the market which can be purchased at a nominal price and which are satisfactory. It should be kept in mind, however, that while a fairly high relative humidity is desirable, it will represent greater heat loss if the leakage is excessive. Some happy medium should therefore be found.

We feel very sure that some modifications to the proposed design will be found after the installation is in use but the fundamentals are sound and it represents a low cost installation that will be fully automatic and very efficient. The device is not patented and we wish that others in the northern belt would try it out so that in another year we can have some cumulative experience.

Demand and Load Factor

I cannot close without touching once more on the question of demand and load factor. We can rest assured that the load factor will be better than the pessimists would have us believe. Also, the diversity will affect the demand more favorably than might be anticipated from the nature of the utilization. For example, the production and distribution load factors and the diversified demand of a substantial number of total house heating installations would be rather better than a similar number of instantaneous automatic water heaters used in the summer. They would be about as good as the

same number of gas ranges used in the summer only. They would be very, very much better than an equivalent capacity in room heaters used incidentally.

These statements are not made to encourage the solicitation of house heating. It should be clear by this time that this is no part of my discussion. If you believe in it, by all means solicit. If you are dubious, sit tight, but before long you will be put to it to find means to discourage it, and you will not find them. My plea is to establish in your minds a broad, practical plan of procedure along all angles of the problem.

We believe the plan I have outlined is the most practical.

Sales Stimulation

Report of 1923 Committee—Training the salesman—Educating the housewife—Committee's recommendations

Salesmen, both new and old, should be trained. Advertisements, follow up letters, attractive window displays, prizes for prospects, prompt attention to complaints, allowing all gas company employees to join sales campaigns are a few ways in which gas sales can be stimulated.

The report of the Sales Stimulation Committee of the Commercial Section of the American Gas Association, read before the Tuesday meeting at the Atlantic City Convention embodied these and other recommendations, dealing with the stimulation of sales.

Various text matter, which appeared in the Gas Sales Promotion Bulletins during the year is appended.

THIS report treats, in a general way, with the subject of sales stimulation, and with the investigations, achievements, and recommendations of your Sales Stimulation Committee. Contrary to custom, there will be fewer words from the platform and more from the audience. Members who have put the committee's suggestions to test will have an opportunity to tell us of their experiences. Undoubtedly, greater benefit will accrue from discussion of such experiences than from the discussion of this report.

Sales stimulation, in some form, is part of the program of every progressive manufacturer, wholesaler, jobber and retailer. However, activities that arouse real interest are the exception. Real interest, which is an incentive to buy, cannot be obtained by the application of mediocre sales methods. Extraordinary inducements must be offered to influence buyers at a time when the tendency is not to buy.

Regular changes of seasons, and the coming of certain established holidays, create a natural demand for gas appliances, household equipment and merchandise sold by utility companies, but it is during the periods between the demand for "seasonable goods," that we must be on the alert to discover ways and means to make people want to buy what we have to sell.

Preparation for Dull Seasons

We must anticipate the downward trend in the curve on the sales chart and be prepared to meet it face-to-face, with well-formulated plans for gaining non-voluntary attention to our sales efforts. We must create a market when there is no market, and we must answer that weak-kneed proverb, "It can't be done," by doing it.

People are always curious to learn something, through a newspaper or billboard advertisement or through contact with a company representative, which involves for them personally a certain profit or something which will enable them easily to satisfy a certain want. A prospective customer is interested in anything that concerns himself such as his welfare, his comforts, his ambitions, or his desire to save money in his business or his home. The primary source from which to secure ideas that grip the attention of the prospect is the prospect's own interests.

Real salesmanship is not order taking. Real salesmanship is an attempt to induce the prospective customer to buy an article for which he has not heretofore recognized a need. The clerk who jots down various items ordered by a customer is doing no actual sales work. The customer had already recognized his need for certain articles; he had already sold them to himself. Now he is merely telling the clerk what he wants. But if the clerk shows him his need for, and sells him something he had not planned to buy, the clerk then has done real selling.

The distinction in this simple illustration is worth noting, for it may be well applied in our efforts to stimulate appliance and merchandise sales, and ultimately to increase the sales of gas. If prospective customers have recognized their need of gas ranges, water heaters, room heaters, laundry equipment and other merchandise, well and good—they will come to our salesrooms and buy. But if they do not see the need for our goods between seasons,

and they do not buy, it is because the goods have not been sold to them.

Salesmen Must be Competent

Only competent salesmen should be engaged in selling gas appliances and merchandise. The word competent, as used here, should not be construed to mean perfect. Salesmen are not to be expected to sell every prospect. No one ever batted 1,000. However, our representatives should know the science of selling and they should have sufficient initiative to find new ways that can be applied to the stimulation of sales every month in the year.

The securing of a prospect's confidence depends to a great extent on the enthusiasm and attitude of the salesman. If he has confidence in himself and in the merit of the goods he sells, and if he breathes that confidence into his sales talk, the prospective buyer is not likely to doubt his sincerity.

Our task is to convince prospective customers that they will make no mistake in buying our goods. When we are trying to sell an article, we should prove to the prospective customer that our statements are true. Have facts and figures at hand to prove them. Have testimony from satisfied customers.

Present day merchandising of gas-fired equipment requires salesmen who have had experience in the gas industry and also a thorough and broad technical training.

The successful salesman of gas-fired house heating equipment must be able to calculate radiation, be conversant with the various systems of hot water, steam, vapor and hot air heating and be acquainted generally with heating and ventilating practices. Again, the salesman of hotel and restaurant appliances must be equally familiar with kilowatt hours and cubic feet of gas.

In short, these positions generally presuppose engineering training equivalent to a college degree. These men should, therefore, be engineers, as well as salesmen. They sell, but at the same time they plan, lay out and recommend appliances, systems, policies and ideas.

Sales engineers are as necessary to a high grade merchandising organization as are certified accountants in the accounting division, and recognized legal authority in the corresponding departments of a gas company.

Demonstrate Salient Features

It has been said that too much talk has killed many sales. That may be true, but it is also true that many a sale has been lost because the salesman has not demonstrated fully to the customer the salient features of the articles that are especially adapted for his use. It is not sufficient to say that a certain type of room heater is "a good heater" or "it is just the heater for your requirements," or "I can assure you that you will be satisfied with this heater," or "you will not be annoyed with soot or ashes." These are all good selling points, but the important point is that the heater radiates heat, throws it out into the room; that's what the customer wants to know. He is interested in what is adapted for his use. The same fundamental principle applies to the sale of all appliances. There is an outstanding feature in every article we sell, which has a special appeal to the buyer. If we overlook the feature that interests him, we may lose a sale.

Training the Sales Force

Training and education of salesmen is valuable to every sales organization. Instruction meetings should be held daily, semi-weekly, or weekly. These meetings should be in charge of supervisors or managers of sections. Salesmen should be encouraged to enter into animated discussions of subjects related to the selling of appliances and merchandise, and they should be required to write short papers on subjects assigned to them by the sales manager. Practical educational developments stimulate sales.

It has been the desire of the committee, in sending out its sales stimulation bulletin, to suggest ideas that would be adaptable to the sales organizations of large and small companies alike. Many requests from manufacturers, as well as from gas companies throughout the country, for additional copies of the bulletins, have been very gratifying. This interest is indicative of enthusiasm. It means that many of our members have determined not only to bring sales up to normal, during the so-called valley months, but to show an increase over the corresponding period for the preceding year.

Results of Sales Stimulation Plans

The Peoples Gas Stores in Chicago adopted the plans outlined by the Sales Stimulation Committee in the January—February—March bulletins. Their sales increase for the first twenty days in January, 1923, as compared with the corresponding period for 1922 was 25.7 per cent. Plans recommended by the committee in subsequent bulletins were also adopted. On June 30, the increases for the first six months of 1923 was 23.4 per cent over the corresponding period of 1922.

The Public Service Gas Company of New Jersey increased its water heater sales 100 per cent last year largely through a "wagon campaign" which is described in the April—May—June bulletin.

Thousands of obsolete appliances have been replaced by efficient up-to-date appliances, in accordance with recommendations in the July—August bulletin.

The fact that appliances are old and worn out leads to many complaints of inadequate service and is the cause for frequent attention and adjustment. Customers do not usually blame the appliance, or its inadequacy—they are more apt to attribute the trouble to the quality of gas or to blame it upon the company's poor service. Hence, the service suffers in popular esteem, the obsolete appliances are not likely to be used, and the sales of gas are therefore correspondingly reduced.

At the time of writing this report the committee was not in a position to know the outcome of recommendations contained in its bulletin for September, October, November and December. This bulletin offered a number of suggestions for stimulating sales during cold weather and during the holiday periods.

Sales Stimulation bulletins were sent to all member companies throughout the year. Copies of the bulletins are appended to this report.

The committee has not made investigations with regard to stimulation of Industrial Gas Sales. This very important item will be the subject of an independent paper.

Educating the Housewife

Now after all that we have said and done there stlil remains something of vital importance. In order to stimulate sales we expend a great deal of time and energy and money. We accept small first payments, grant liberal credit terms, give away substantial premiums, and make allowances for old appliances turned in when new ones are purchased. Something else must be done after the customer has begun to use the appliance. There must be a ceaseless campaign of education to instruct the housewife in the many ways that gas may be used for domestic purposes. Your committee is strongly in favor of a Home Service Bureau or Department of Home Economics for this purpose.

Responsibilities of the Sales Department

Selling is the most important function of business; all other functions are auxiliary. To be sure, all other functions are essential to the efficient operation of business, but they are essential because they are highly important aids to the main function. However, in our eagerness to stimulate sales of appliances and merchandise, let us not, for one moment, overlook the fact that primarily, the Sales Department functions to increase the consumption of gas. From the standpoint of gas company management, gas sales are paramount to the sales of appliances and merchandise.

The Sales Department must do its part in the promotion of gas sales by rendering a quality of service that will insure friendly relations with customers. It is the duty of our salesmen to recommend only such appliances that are best adapted for a customer's use. Any follow-up system for the purpose of ascertaining that newly installed appliances are operating efficiently, will be appreciated by customers. Sometimes this gratuitous service results in the sale of additional appliances.

We should, of course, co-operate at all times with plumbers and heating contractors in our respective communities by furnishing any necessary information or assistance with regard to gas installations.

The real result desired in a co-operative plan is to encourage the plumbing and heating trade to recommend, sell and install in a suitable manner, as much gas-fired equipment of acceptable make as possible. Whether they buy it from the gas company or whether they sell the same make as the gas company is not important, as long as the appliances they do sell are good appliances. The result we really are seeking is the sale of more gas; therefore, honest and friendly competition is desired. The making of a sale to this trade as far as a merchandising transaction and profit is concerned is of little importance.

Enthusiasm the Keynote

Nothing great was ever achieved without enthusiasm. Becoming excited is not enthusiasm. Some one has said that "Enthusiasm is a proof that a man believes in a thing." Salesmen and sales managers must be fountains of enthusiasm if they expect prospects to become enthusiastic over their sales projects. We must study our goods from every angle, read about them, talk about them, experiment with them, know them so well that no amount of cross questioning, criticism or doubt can possibly confuse us.

We of the Sales Departments, who stimulate sales, are the go-getters of the gas industry. We believe that no one has ever invented a good substitute for work; therefore, we must create a market for our goods, when there is no market; turn dull seasons into good seasons; twist the curves upward on the sales chart when the trend is downward, and pull the valley months up to the peaks. We must find new uses for gas in old places and old uses for gas in new places. There is a market for gas appliances and merchandise the year around. We can sell that market, but it won't come to us out of season.

Recommendations

The committee recommends:

1. Training for new and old salesmen.
2. Sending letters of appreciation to customers who open new gas accounts.
3. Following appreciation letters in ten days with Appliance and Merchandise sales letters.
4. Merchandising ads in daily newspapers, advertising on gas bills, publishing pamphlets, direct by mail, billboard.
5. Appropriate and attractive window and floor display.
6. Invitation to all employees of the company to join in sales campaigns by sending in prospects.
7. Prizes for prospects that result in sales.
8. Allowances on old appliances turned in when new appliances are purchased during July and August.
9. Prompt attention to all complaints.
10. That the Sales Stimulation Committee be continued for another year.

Gas Sales Promotion

Recommendations of the Sales Stimulation Committee Commercial Section

January—February—March

Increase Your Off-Peak Gas Merchandise Sales

A LET down in the public demand always follows immediately after the Christmas holidays. The department stores are quick to sense such a condition and stimulate their sales in this off-peak period by special inducements as to price and terms in "January White Goods Sales," the "February Furniture Sales," etc.

Continued on page 392

The Budget

Report of 1922 Committee

Construction—Operation—Materials and supplies cost

F. H. Patterson, Chairman

Rochester Gas & Electric Corporation, Rochester, N. Y.

A BUDGET System should be an essential feature of every well regulated organization. It furnishes for the management a forecast of activities and a control over expenditures.

Budget making falls logically into four separate divisions:

Construction
Operating
Materials and Supplies
Cash

For this reason the report of the Budget Committee is divided under these captions, separate subcommittees having dealt with each subject. Each section is designed to be complete in itself so there is little to be stated of a specific nature in this introduction.

These general aspects of the subject are worthy of note, however.

Budgets may be of the term or continuous type, the former being for a definite period, for example, the calendar year of six months, while the latter is a continuous record in which new activities are added and those completed dropped.

The method employed in Budget making and administration is dependent upon the size and organization of the company concerned. The general plan productive of the best results may be outlined as follows:

The forecasts are prepared by the departments concerned and forwarded to a budget officer or committee closely allied with the management. The data furnished is assembled into a complete budget. The more important projects may have to be authorized by the Board of Directors in addition to the management. When all formalities have been complied with and such revisions made as may be required by the management the statement becomes the official budget for the period. Thereafter, during its term, the budget officer or committee should furnish each department periodically a statement of the actual costs in comparison with its forecast. These statements of all departments would also be reviewed by the management.

The educational benefits to all who participate in the preparation of the budget is obvious, while the standards set up stimulate department heads to keep within the record. A budget, however inaccurately prepared, is better than no budget at all. Even an inaccurate budget represents a plan and continued experience in budgeting will result in better planning and in more efficient and intelligent outlook into the future, bringing closer co-operation of all departments with each other and resulting in better and more efficient and, over a long period, cheaper service to the public.

In the preparation of this report acknowledgment is made of the courteous co-operation rendered by Mr. D. W. Harris, chairman of the Budget Committee of The National Electric Light Association, especially for permission to use that Committee's Report read at the Convention of 1922 and from which much information on this subject was derived.

There follow in order the reports of the sub-committees on Construction, Operating, Materials and Supplies, and Cash Budgets.

Respectfully submitted,

F. H. Patterson, Chairman; W. S. Barker, Isaac S. Hall, F. M. James, Joseph Jeffrey, B. F. Braheney, Edward Porter, F. G. Rastenberg, George E. McKana, H. C. Davidson, A. A. Wilbur, B. P. Shearon, R. E. Phillips, A. C. Winters.

Construction Budget

Objects and preparation of budget—Various systems of check and control

H. C. Davidson

Consolidated Gas Company of New York, N. Y.

BUDGETARY control is particularly important to a public utility in respect of its construction expenditures. Its investment in additions and extensions usually originates primarily from necessity to insure uninterrupted service and meet a larger demand upon its service. It cannot defer the enlargement of its plant until financial conditions may be favorable or increased profits are assured from the additional investment. The co-ordination between the commitments for construction expenditures and the ability to finance these additions under favorable conditions is therefore an essential part of its financial management.

Objects

The construction budget provides an effective means of accomplishing this co-ordination by a standardized routine. Its object may be broadly defined as:

(1) To insure a well balanced and carefully planned construction program.

(2) To provide a basis of centralized executive control over expenditures for plant and property, and

(3) To furnish the executives with a forecast of the proposed construction outlay sufficiently in ad-

vance of the actual requirements to permit adequate planning of necessary financing.

Presumably no company can continue the policy of expansion indefinitely without involving the necessity of interesting additional capital in some form, and we believe every company has a budgetary program to a greater or lesser degree. It may consist merely of informal estimates not rounded into a comprehensive plan, but the same fundamentals exist. It is hardly necessary, therefore, to enter into a detailed discussion of the advantage of the formal budget, and consideration of the subject is directed primarily to a suggested procedure for a definite program.

The elaborateness of the program will depend upon the conditions of the individual company. In a small company where the executive may be in intimate contact with the details of the plant, the program may be agreed upon practically without the necessity of formal records, whereas the same result in the larger companies may require inter-departmental records and a regular routine. Physical conditions may also affect the routine necessary. More complete reports, for instance, will be required by a company whose executive offices are located at a distance from the actual operations than by one whose executives are within immediate access to the original details.

Annual and Continuous Budgets

A budget may cover a definite period, for which the period of a year is recommended for the construction budget, or may be continuous, providing for a uniform period in advance by the addition of a month to the forecast as each month is passed and dropped from the schedule. The continuous budget has the advantage of a definite program at all times for, say, a year in advance, but construction plans do not lend themselves as satisfactorily to piecemeal consideration of plant additions as in the case of a forecast of operations, particularly in localities where the construction is seasonal and large projects are usually undertaken as far as possible under the more favorable conditions of the summer months.

The annual budget necessarily accumulates a certain amount of deadwood before the end of the year, but on the other hand, affords a more definite comparison progressively during the year between the forecast and actual expenditures. It likewise may become incomplete before the end of the year, by the changes in plans or conditions which could not have been foreseen at the time of its preparation, and quarterly consideration is recommended whether the annual or continuous budget is adopted. In the one case for action upon such additions as may have become necessary since its adoption, and in the other for the inclusion of the additional quarterly period. The annual budget is discussed in the procedure outlined below as the routine is substantially the same under either method.

Preparation of Budget

The initial step in the procedure of preparation of the construction budget is a report from each Operating Superintendent to the Chief Engineer or proper executive, containing recommendations of the ordinary extensions and additions needed, each project being reported upon a separate sheet for individual consideration. Thus the operating engineers become an integral part of the organization in the consideration of plant additions. These reports should include also items of major repairs, as action upon proposed construction may be directly affected by the policy adopted in connection with changes to existing plant, or a single project may involve both alterations and new construction. Such reports should be made from time to time as the need arises, but for the annual budget system complete recommendations should be made at least two or three months prior to the beginning of the year.

These recommendations should be passed upon first by the Chief Engineer, and have his approval before the preparation of estimates of the cost of the work contemplated. In fact, the departmental reports may be considered merely tentative suggestions for his guidance as a preliminary survey to be revised, amplified or disapproved, according to his judgment. Alternate plans as to the same project may also be submitted for estimates, for final decision after the comparative costs are known. When material changes in the program are made, it is recommended that the Superintendent in question participate in such decision, that he may be entirely familiar with the revised plans for his department.

Major Extensions

Items representing major extensions to provide for the anticipated growth of the company, or expansion of its activities, will probably originate with the Chief Executive, and will require estimates by the new Business Manager of the volume of sales for several years in advance, and the recommendations of the engineers as to the most desirable type and location of the additional facilities.

For the purpose of the budget, "round figure" estimates are usually made, as too much time would be required for detailed plans and exact quotations. Attempt should be made, however, to determine as accurately as possible by short-cut methods the estimated cost, in order that the budget may be of the greatest value.

When estimates have been made of the costs of the various projects tentatively considered, the data is ready for the formulation of the final construction program to be submitted for approval. The procedure at this point will depend upon the manner in which a company is organized. The preparation of the budget may be made by the Budget Committee itself, or may be made by the construction engineers acting either as a formal sub-committee or by informal conference.

Functions in Preparation of Budget

Two distinct functions, however, enter into the preparation of a budget:

(1) The physical construction needs for increased facilities or economies of operation, for which the construction engineers are best qualified to make recommendations unhampered, and

(2) Consideration of these needs in the light of financial conditions or in connection with the general policies of the company.

Whatever the form of a company's organization, the budget as originally drafted should, in the writer's opinion, represent the former, to be subject to revision as may be required before final adoption.

It is immaterial whether the Budget Committee fulfill the one function and the Board of Directors the other, or the Budget Committee assign the former function to the engineering staff and reserve its approval to the final program which it may ask the Board to authorize.

Grouping of Projects

It is the usual practice to group the budget projects recommended according to the urgency of the work, for which the classifications of (1) Imperative, and (2) Desirable, appear to have been most commonly adopted. Some companies sub-divide the projects in greater detail according to the urgency or purpose of the construction, but it is believed that the two classes above will serve all ordinary needs for the average budget.

The budget should also include the expenditures necessary for the completion of projects authorized in prior years. Some companies re-estimate the cost of the construction remaining, revising the estimate to conform to changes in plans which may have been adopted since the original budget authorization was approved. Other companies prefer to adhere to the original budget figures, providing in the current year's budget only for the actual unexpended balances, and to report separately proposed additional expenditures arising from revision of the initial program.

Record of Construction Costs

The budget will be of little value unless a check is maintained upon those responsible for its execution and accountability is established for variations between the estimated expenditures and the actual costs. It is incumbent upon the Accounting Department therefore to maintain a record in some form classifying the construction costs by budget items.

The form of such a record will depend upon the accounting practices employed. If a job order system is used, the job order—or a master sheet summarizing several orders applicable to the same budget item—will serve as a convenient means of compiling the necessary data. Companies not using the construction job order system may accomplish the result by a budget record to which all entries affecting budget items are posted. If a columnar construction ledger is used, it may be possible by the assignment of separate columns to provide automatically the budget information without additional clerical labor.

For the purpose of complete data during the progress of the work, the Construction Department may also require for its needs a record of expenditures on each budget project. This record will take into account contractual obligations as incurred and will serve as a guide to the engineers during the construction period, and upon the completion of each project and the entry of all charges in the books should be reconciled with the Accounting Department record of the actual cost.

Authorization System

Some companies maintain an authorization system in addition to the budget, requiring the approval of the Board of Directors or the Executive Committee for all expenditures over a certain sum or upon all construction and repair work. While this authoization may appear to be a duplication of the budget routine, the approval of the Board is not usually asked until detailed plans have been drawn and actual quotations obtained and the company is ready to go ahead with the work or let the contracts. The authorization represents, therefore, the approval of specific expenditures before the contractual obligations are incurred.

The amounts so approved by the Board may frequently differ from the budget forecast, as detailed plans may reveal the necessity of changes in type or capacity of apparatus, etc., or prices may have changed since the preparation of the budget. The budget records therefore under these conditions will require comparative statements by items, setting forth (1) the amount provided in the Budget, (2) the expenditure authorized by the Board or Executive Committee, and (3) the actual cost.

Again the existing routine will govern the method to be employed for recording these authorizations and identifying them with the budget items. Provision may be made in the budget record to include this item automatically. In the case of the budget classification in the ledger, however, a file of the transcripts of the minutes with the budget numbers entered thereon as a supplementary record may be more satisfactory.

Monthly Report

The monthly report of budget expenditures, if comparison only with the budget is involved, will be simple in form. If the authorization system is combined with the budget it must provide for comparison between the actual expenditures and both the budget allowance and amount of the authorization.

Practices appear to differ as to the inclusion in the budget report of expenditures made in prior years upon projects extending into the current year. The budget itself involves only comparison with expenditures of the current year, as it includes only the unexpended balances of construction commenced in previous years. As to the Executive Committee or Board authorization, however, report may be required of the aggregate expenditure upon each authorization, in which case the amounts expended in prior years upon current projects may become a necessary part of the report.

Cash Budget

Preparation and use

George E. McKana

The Peoples Gas Light & Coke Company, Chicago, Ill.

A CASH BUDGET, otherwise called the Financial Budget, is essentially a budget prepared to show the effect upon the utility financially of the operation called for by the other budgets. Its purposes are:

1. To enable the management to take a final survey of the operations proposed.
2. To show the financial officers when, and how much, money is required to meet obligations incurred in pursuance of the other budgets.
3. To present data which may be used as a guide in the negotiation of loans or issuing of securities required in connection with financing the projects.

The Cash Budget is usually prepared by or under the direction of the financial officer of the Utility.

Terms of Cash Budget

Like other budgets, the Cash Budget may be continuous or for a term. There is no essential difference in the form, information or procedure in connection with the continuous budget from that in connection with the term budget. A term budget may be for either one year or a shorter time, but if a term budget is to be prepared there is some value in using the same period for the cash budget as used for the others. By so doing, the cash budget is able to present a complete picture of the results of the operations under the other budgets, whereas if it were prepared for less than the same term it could show only a part of the picture. In any case, however, revision must constantly be made, and it should be comparatively easy to prepare a cash budget on a continuous basis which would always forecast for six months or a year ahead. Unless the operating and construction budgets are also prepared for the same period, however, there will be some parts of the term in which it will not be possible to include in the cash budget any real estimate of operating and construction requirements. That is, if the cash budget is continuous, for a year's period, when the July cash budget revision is made, there will be no construction estimate upon which to forecast payments in the last six months of the budget period, i.e., the first six months of the next year. However, a rough estimate may be included which will be fairly satisfactory or the cash budget may be prepared specifically omitting any allowance for construction expenditures in the last half of budget period. For convenience, a term budget will be referred to herein.

Adjustment of Construction, Operating and Materials and Supplies Budgets to Cash Basis

Before the figures presented by the other budgets can be used in a Cash Budget, they must be adjusted to a cash basis. In the case of construction, for instance, it very often happens that work for which liability is incurred in one month will not be paid for in cash until some time thereafter. In such a case the cash budget must reflect the cash payment, not the incurring of the liability. This adjustment must be made, of course, by the officer preparing the budget, but the information necessary to make the adjustment will very likely have to come from the Construction Department.

In the same way there are adjustments to be made in connection with the Operating and Material and Supplies Budgets. First there are the adjustments such as that necessitated by the fact that the estimated cost of Generator Fuel and Oil to be used as shown in the Operating Budget will very likely differ from the cost of Generator Fuel and Oil required to be purchased, because of differences both in quantity and price. Taxes charged to operations in equal amounts during the twelve months are usually paid annually, semi-annually, or quarterly during the current year or the following year. The cash budget must reflect the date of payment, regardless of the period in which the charge is made to Operating Expense.

Then, also, there are the adjustments due to the inclusion, in the Operating Budget, of charges for the amortization of prepaid expenses, accruals, reserves and other charges of a similar nature which, while properly included in Operating Expense, do not require the current payment of cash and hence are not to be included among cash disbursements.

There is a third type of adjustment which must be made, this time in connection with the Materials and Supplies Budget. Duplication of items in the Materials and Supplies Budget and in either the Construction or Operating Budget must be eliminated in preparing the Cash Budget.

Preparation of Cash Budget

The financial officer, having made adjustments as required, combines the results of the Operating, Construction and Materials and Supplies Budgets and sets down as a cash budget the estimated cash receipts from each of the various sources from which they may be derived and, taking into consideration the cash on hand, determines the estimated total cash available. In the same manner he sets down the anticipated expenditures for each of the several purposes and thus detemines the estimated total cash expenditures. An excess of cash receipts over cash expenditures will represent the probable increase in cash resources. An excess of expenditures over receipts will indicate that, unless the present balance is sufficiently large, some part of the proposed activities must be curtailed or omitted unless new capital is derived from the issue of securities.

In connection with this point may be mentioned the requirement often made by regulatory bodies granting the issuance of securities that the funds derived therefrom be used for a specific purpose. If such security issues are contemplated in the budget, the

estimated receipts and disbursements on this account may be set forth separate from the main body of the budget, since the cash derived from this source will not be available for the general purposes contemplated in the budget.

Forms

Probably every company has what is effectively a cash budget, but very few companies have a specific form to be used. Usually a typewritten statement is prepared showing estimated cash receipts and disbursements, and no further form is required.

Reports Regarding Cash Budget

Like the other budgets the cash budget should be followed, so far as possible, and comparison should be made from month to month of the actual with the estimated results. The form for such a comparison should be practically the same as that in which the budget was prepared. It is desirable also that the cumulative estimated and actual results be compared, since ordinarily some variation of estimated and actual receipts or expenditures in each month may be expected which, over a longer period, may not exist to any noticeable extent.

Summary

The advantages to be derived from a cash budget properly prepared and closely estimated are apparent. Expenditures and receipts can be estimated very closely, and the cash budget is useful in about the same degree as the estimates are accurate. It must be admitted that some difficulty may be encountered in getting accurate estimates at the first attempt, but as time goes on the added experience in forecasting will make for very close results.

Experiment in Residence Gas Heating at Denver, Col.

Furnace conversion—Discussion of results obtained—Problems encountered—Improvements to be made

T. M. Foulk, Engineer of Utilization, and T. G. Storey, Superintendent, House Heating Division, Denver Gas & Electric Light Co., Denver, Col.

This paper was read before the Wednesday meeting of the Technical Section of the American Gas Association assembled in Convention at Atlantic City.

DURING the winter of 1922-23 The Denver Gas and Electric Light Company inaugurated an experimental program of residence heating with gas. It is the purpose here to report; first, the conditions under which this program is being conducted; second, the methods and experience relative to installations, and third, the economic results obtained.

It may be interesting to consider first some of the general heating situations existing in Denver. In the first place, the city is located in the heart of Colorado's lignite beds, which makes available an abundant supply of comparatively cheap fuel. It also has extraordinary temperature conditions. A survey of average monthly temperatures prevailing in Baltimore, Chicago, Portland, Los Angeles, St. Louis, San Francisco and Denver for the past fifty years shows that Denver has the lowest average temperature during the heating season, with the exception of Chicago. In addition to this, it is subjected to wide variations and sudden changes in temperature during the winter months. Consequently, a fuel that readily lends itself to meet such conditions has decided advantages.

Another point of interest, bearing on the general heating situation, is the fact that a gas, low in heating value, is being successfully utilized; this value being 400 B. t. u., 30" Hg and 60° F.

The most important preliminary step was the selection of a suitable rate. After a study of the situation, the following three-part rate was adopted:

Rate "U"—House Heating Service—Temporary Three Part Rate

Available to any customer for house heating and other domestic fuel purposes.

Rate (Three Parts)

(1) A Customer Charge:
Per customer per annum, $9.00 (payable in 12 equal installments.)

(2) A Demand Charge:
Per 100 cu. ft. of maximum hourly demand per annum, $21 (payable in 12 equal installments.)

(3) A Consumption Charge:
Per 1,000 cu. ft. of gas metered, 40c.

Discount:
For payment of any bill within ten (10) days after it is dated, 10%.

Under the rate, the customer's maximum hourly demand is determined by actual test after the installation has been completed.

Heating Cost

Another important preliminary step was the selection of a basis for estimating the heating costs to the consumer. To assist in this, the following formulas are used, which give approximate gas consumptions:

1. Hot Air—Cubical contents of the building in feet, multiplied by three, gives the average gas consumption in cubic feet per month for the eight months.

2. Hot Water—The number of square feet of radiation, multiplied by 120, gives the average gas consumption per month for eight months.

3. Steam—The number of square feet of radiation, multiplied by 240, gives the average gas con-

sumption per month for eight months.

The demand to be established for an installation is governed by the size of boiler, number of burners used, and the requirements of the customer.

Gas-fired boilers are selected to take care of the necessary amount of radiation. A demand of seventy cubic feet per boiler section is used to determine the maximum hourly demand, as the burners are adjusted by the manufacturer.

The size of hot air furnaces depends upon the cubical contents of the building, which in turn controls the number and size of burners to be used, and consequently the demand. These demands range from 250 to 500 cubic feet per hour.

In the case of the conversion of coal-fired boilers to burn gas, the demand is dependent upon the number and size of burners required for that particular size of boiler.

Methods of Installation

The installations in Denver may be divided into three main classes: gas-fired hot air furnaces, coal-fired boilers converted to burn gas, and gas-designed boilers.

Hot Air Furnaces

Several types of gas-fired hot air furnaces were installed. The standards of construction are not up to those of the gas-fired boilers since these furnaces were all constructed of sheet metal. Some doubts were entertained about the lasting qualities of an all sheet metal furnace. Special mention might be made of one type which was made of large drums and could not be taken through the ordinary door, so it was necessary in some cases to cut a passage through the foundation.

As all the manifolds and mixers were designed for natural gas, they had to be replaced by equipment designed for manufactured gas, which is shown in Figure 2.

Hot air furnaces were sold in three sizes, for $100.00, $121.50 and $140.00, respectively. The average cost of installing the furnaces was around $100 Some of the older places ran higher, for in all cases an inside cold air duct was required, and any additional piping deemed necessary to insure satisfaction. A thorough check was made in all cases before signing the customer, and all changes agreed upon.

Conversions

A standardization of burners and baffling used in the conversion of coal-fired boilers to burn gas was hampered somewhat by the difference in design of the boilers undertaken. The systems shown in the sketch of a round conversion (Figure 3) were followed as closely as possible.

Since experiment and theory indicated that the best results were to be obtained when the flames impinged upon the water leg burners that would fulfill this condition were desired. Straight cast iron tee burners in three sizes and circular cast iron burners in two sizes were used. Throat mixers were designed, as shown in Figure 8, with threaded ends, so that the burners and mixers might be connected with 1½ inch pipe, and threaded joints, with mixing and burner tubes butted together, thus preventing eddies, and creating a substantial joint, which held the burners firmly in position.

After selecting the burners and mixers, the problem of their placing in the boiler was considered. The most convenient and desirable method was to insert the mixers through the clinker door. If the clinker door was too small, the mixers were put through the ash door and part of the grates removed. When the grates were removed, a support for the burners and baffling was made of strap iron.

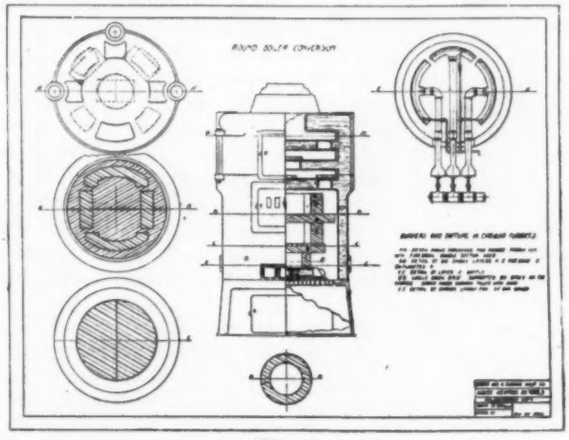


Fig. 3

Baffling

Baffling from a standpoint of efficiency of operation is the most important part of the conversion. Good baffling requires a great amount of care and experience on the part of the workman, with close adherence to that arrangement which has been found to give the best results. A variety of methods have been tried, and the one shown in Figure 3 was adopted for round boilers.

A circle brick (Section D'D') 4 inches to 6 inches high, and with a diameter 3 inches to 4 inches less than the burner ring, forms the base piece, as shown in layer No. 1. Two flat tile, forming a circle 6 inches smaller in diameter than the fire pot form layer No. 2, section C'C'. Layers Nos. 3 and 5 are formed from two arches 3 inches thick and 5 inches high, section B'B', while No. 4 is made of flat tile, with a diameter 2 inches smaller than the water leg. Layers 3 and 4 are repeated alternately until the top of the section is reached. Firebrick splits are used to partially close the gas passages in the boiler above the firepot, thus increasing the length of fire travel, rate of flow and diffusion of gases.

Pilot Lights

The pilot lights for conversions are made of three-eighths inch copper tubing, split down two inches and flattened so that a flat flame results. This tube is curled over the end of the burner to insure ignition. Pilots are so placed that they may be easily lighted and seen. They burn on the average about seven cubic feet per hour.

The door through which the mixers enter is removed and the opening is partially bricked up. Sufficient openings are left for secondary air and the

job is finished neatly with a good grade of cement.

The piping, valves and manifold are standardized to two-inch fittings. The manifold is made up of 2"x2"x¾" tees and close nipples.

Water Coils

The water coils were always removed before converting a boiler. It was found that their presence interfered so greatly with the setting of a baffle that poor efficiencies resulted. In one or two cases coils have been used to good advantage in the flue, reducing the stack temperature; however, in all cases standard gas water heaters have more efficiently provided for hot water requirements.

The equipment for the average conversion amounts to about $65.00. In most cases, two experienced men can complete the job in one day, though when the grates have to be removed, a longer time is required.

Gas-Fired Boilers

The first cost of a gas-fired boiler is little more than the cost of an equivalent coal-fired boiler. The cost of installing a gas-fired boiler is very low, since the boiler stands on the floor, takes very little room and requires no pit.

After a gas-heating system was installed and operating, a flue gas analysis, including a determination of CO_2, O_2 and CO, and stack temperatures, was taken. From the analysis the need of adjustments could be readily seen and changes were made until a good analysis was obtained.

Increased efficiencies in operation were obtained principally by reducing stack losses. The burners used were cast on good principles, both from design and operation standpoints. Radiation losses were reduced to a minimum by the proper use of good insulating materials in jacketing the boiler and piping. The stack losses were the only losses that could not be easily controlled, being the sum of several factors which must of necessity be considered and adjusted simultaneously, such as gas pressure and rate, secondary air adjustment, baffling, drafts, check valves and dampers.

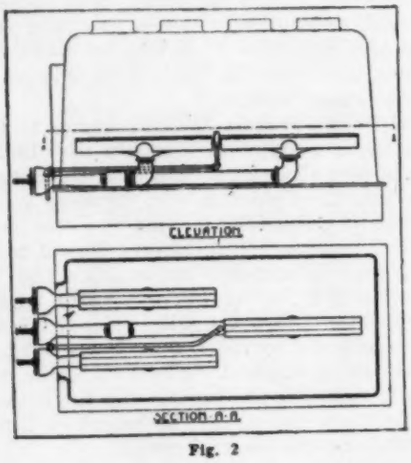


Fig. 2

Adjustments

The adjustments on gas-designed equipment were easily and quickly made, while those on conversions often required considerable time. Since no two boilers operated under the same conditions of flue connections, cut and try methods were used. If CO appeared in the analysis the secondary air openings were enlarged and dampers adjusted. Generally, the air was in excess and openings and dampers had to be closed.

Secondary Air

The proper adjustment of secondary air is very important. All air in excess of that required for proper combustion, which enters the furnace, is heated up when passing through the combustion chamber and up the stack, absorbing heat which is lost in the open air. While it is neither desirable nor practical from the standpoint of satisfactory operation to decrease the secondary air to the theoretically proper amount, the over-ventilation in most cases was greatly reduced. Experiments led to the conclusion that approximately 25-40 per cent over-ventilation with gas-designed equipment, and 40-55 per cent for conversions would give satisfactory results under all conditions. In calculating stack losses the moisture content of the flue gases was taken into account. It was found that the average stack losses for the gas designed boilers were 12 per cent and those of the hot air furnaces and conversions were 15 per cent.

Very little trouble occurred during the past season. The automatic water pans on the hot air furnaces gave some trouble from valves and resultant overflows. This was eliminated by manual control of the water valve. Some trouble resulted by pilots carbonizing, but this was very small.

The majority of installations were thermostatically controlled, and such control was strongly urged. The heat regulators were installed at a cost to the consumer of from $80.00 to $105.00.

The best condition for both the customer and the company is to have a low demand and long heating period. The thermostats tended to give this, since they were set to turn the gas on early and keep a constant temperature throughout the day.

Economic Results Obtained

A summary of house heating data comprising thirty-six representative installations, of which there were sixteen gas-designed hot air furnaces, sixteen conversions of coal-fired boilers and four gas-designed boilers, is shown on a chart (given in the original paper). In order to make proper comparisons, the values shown cover heating only. Separate meters were set in the fuel runs to the heating burners and demands and consumptions were separated from the other domestic appliances.

The demands given on the chart were determined by actual test after the installation was adjusted and in use. Many of the consumptions for the earlier months were calculated to give complete data for the season. This was necessary since there were an insufficient number in operation at that time to give proper comparative data on the various types of installations covering the entire season. The calculated values were based on the average monthly temperatures and cover such a small part of the total consumption that the error introduced is negligible.

The "readiness to serve" charge was made to cover the customer and demand charge for the twelve months. The cost per million B. t. u. of gas was estimated on the basis of a heating value of 400 B. t. u. per cubic foot standard conditions, 30 inches—60 degrees.

Coal Costs

The amounts and cost of the coal given were obtained from the customer, and since it was necessary in the majority of instances to depend upon memory, some error has, no doubt, been introduced in these figures. It was also impossible to ascertain the exact kind of coal used, and hence, the B. t. u. content had to be calculated from the cost and the heating values of Colorado coals listed on the market at those prices. The total cost of coal used was the cost in the bin, ready for use, but not including the removal of ashes and janitor service.

The demand per 1000 cubic feet cantents checks very closely for the three classes of installations when the elements determining demand are taken into consideration. None of the hot air furnaces take a demand lower than 200 cubic feet per hour, and the smaller size furnace will take care of buildings up to 9,000 cubic feet; consequently, small houses have a large ratio of demand to cubical contents. In conversion jobs, orifices smaller than 3/16 of an inch are not advisable, and since the coal-fired boilers, are as a rule, larger than needed to heat the home, the number of burners to give the best results is greater than necessary to burn the required amount of gas; consequently, the demand is higher and the heating period shorter than in gas-designed equipment. There were, also, a few customers who desired a quick response from the heating system and were more concerned with service and convenience than in careful control and costs of operation. In these cases abnormal demands were permitted.

B. T. U. Input

The B. t. u. fired, per cubic foot contents per season, was calculated from the total B. t. u. input, divided by the measured cubical contents. The averages of the three classes, hot air furnaces 8,676, conversions 9,945 and gas boilers 9,611, are in the order naturally expected. The wide discrepancies among individuals of the same class can be assigned to a number of causes. To analyze the situation, the condition of the house must be known. Another important factor is the human element. The number and ages of occupants, their personal habits, and social activities, have an important bearing on the heating operation. The ventilation is very important, and the fact that all of the house is used, or whether certain rooms are shut off from the heat a greater share of the time.

The ratio of B. t. u. fired, gas to coal, gives a good idea of the actual utilization of heat from the two fuels. Hot air furnaces give the lowest ratio and gas-fired boilers the highest. However, only two values could be procured for the latter, so the figures cannot be taken as an exact indication.

Cost of Gas

The cost of heating with gas averages $1.56 per million B. t. u. input, while the cost of heating with coal was 50 cents per million B. t. u. input. However, when placed on the same basis of actual heat utilized, the cost of coal replacing one million B. t. u. of gas averaged 95 cents for hot air furnaces, 84 cents for conversions and 81 cents for gas boilers, or a general average of 89 cents for coal against $1.56 for gas.

In calculating the heating costs with coal, no charges for removal of ashes or janitor service have been considered. In some cases, where a fireman was employed, the actual cash cost of heating the home, per season, with gas has been very close to the costs with coal. There are a number of intangible savings resulting from the use of gas, which can be properly considered, such as cleanliness, economy of space, ease of control and constant temperature, with resultant better health conditions.

The hour's use of demand, per season, is found by dividing the total consumption by the demand. The average for the hot air furnaces was 1,440 hours out of the total 5,856 in the season, while that of the conversions was 1,642 hours, and the gas-designed boilers 1,711 hours, with an average for the 36 installations of 1,559. This gives an annual load factor of 17.8 per cent.

Important Problems Encountered

Some of the more important problems, which have confronted us during the past season, are those of demand, temperature control apparatus, the selection of a suitable hot air furnace for local conditions, and an efficient method for conversion of hot water and steam boilers.

Our experience has been that it is to a common interest to help the customer to lower his demand, by explaining, in detail, what the demand part of his charges mean and how he can lower that demand by the variation of the time of using the gas appliances. This not only gives to the customer a decrease in his demand charge, but gives a better load factor on the distribution system as well. It is expected that it will be possible for the customer, in a number of cases, to get along with a lower demand when suitable conditions are established.

Limiting Meters

Next winter, we expect to install demand limiting meters which may permit the demand to be reduced, particularly for those customers having a large demand in proportion to their consumption. Just how far this can be carried will be different in different cases.

As pointed out before, some customers are more concerned with the unlimited availability than with the cost of operation. It would not be policy, of course, to hold such customers down to as small a demand as other customers who might wish to economize. A correct demand charge, in a three-part rate, adequately pays us for taking care of this demand.

The control of installations has a definite effect in computing the peak demands on mains. Approximately 90 per cent of the heating systems are thermostatically controlled, and when the temperature drops to the predetermined point, the gas is turned full on. When the temperature is raised the desired number of degrees, the gas is turned completely off. Quick acting valves with positive action are used. This means that, at all times during the heating season, the demand is either maximum or zero. It is estimated that, in the coldest period of a severe winter, the house heating appliances will average twenty hours daily operation, which requires a distribution system adequate to supply at least 85 per cent of the summation of the individual peak demands. Thermostatic control gives a reasonable diversity of demand, especially in milder weather. Manual control, permitting partial opening and closing of valves, may be advantageous in that a greater diversity would result, although the houses are permitted to become cold at night, with a resultant heavy load coincident with the domestic breakfast peak.

Problems on Hot Air Furnaces

The problems confronting us on the hot air furnaces are the lasting qualities and the thermal capacity of the material used. From experience gained by other companies, and from an analysis of our own peculiar local conditions, we have decided that an all cast-iron furnace will be the one to best meet our requirements.

It was necessary, for the rapid introduction of gas house heating, to keep the first cost of equipment as low as possible. In order to do this, the present coal equipment had to be used, and suitable gas burners and auxiliary equipment inserted. This proved a failure on hot air furnaces, but after considerable experimental work had been done along this line, an efficient method for conversion of hot water and steam boilers was worked out. This made it possible for us to put 92 customers on the line during the past season, of which only seven have been taken out, due principally to the factor of the human element.

The wide range of customers using gas heating is best illustrated by pictures of representative installations. The variety of uses to which old coal rooms are put is interesting. The majority of people have their basements cleaned and decorated throughout, as soon as the heating system is installed.

GAS SALES STIMULATION

Continued from page 383

In this Bulletin the Sales Stimulation Committee recommends to member gas companies two plans to greatly increase appliance sales during this off-peak period. In addition, the shop force will be kept occupied and the sales organizations will remain interested and active.

The plans suggested herein have been used successfully before. The unequalled facilities of the gas companies for establishing the credit of their customers and for making collections are a further argument in favor of their adoption.

Good merchandise paper is far preferable to stock on hand.

RECOMMENDATIONS

Three Special Offers During January—February—March

1. Accept $2.00 as the initial cash payment with order.
2. Extend time payments over an 18 months' period.
3. Offer some premium to be given free with the purchase of your higher priced permanently connected gas merchandise,—that is, with sales of cabinet gas range, storage water heater, fire place heater, etc.

The following suggest themselves as suitable premium offers:

The A. G. A. Headquarters will on request furnish the names of manufacturers who would be in a position to supply such merchandise for premium offers at an attractive price.

Enameled kitchen table
Set of aluminum cooking ware
Set of dishes
Set of silverware
Set of kitchen cutlery
Ironing board
Kitchen stool

The Peoples Gas Stores last January distributed 5000 enameled kitchen tables with sales of their gas merchandise, and this January will offer a 26-piece set of silver plate, illustrated in the window displays in this Bulletin and consisting of:

6 Knives
6 Forks
6 Dessert Spoons
6 Tea Spoons
1 Butter Knife
1 Sugar Shell

The above premium will be given to each purchaser of an appliance such as cabinet ranges, automatic water heaters, laundry equipment, radiant fires of the better quality, kitchen cabinets, etc.

Special Price for Double Sale

Offer a special price to both purchasers where a double sale is made. As an example, assume your price on a certain appliance is $50.00; offer two at say $90.00. This would be in effect a club plan with an inducement for a customer to interest some friend or neighbor to join in the purchase of two appliances where ordinarily but one sale might be made.

The Split-Tag Idea

The split-tag idea, as illustrated, is intended to offer the salesman an entree to the prospect's premises. The stub is turned in by him to the office as an evidence of his call and also acts as a check in determining his credit in case the prospect calls at the office later and makes a purchase. The tag left with each prospect called on acts as a constant reminder of the special terms and premium in case a purchase is made during the life of the company's special offer.

Inducement to Salesmen for Cash Sales

An extra inducement for salesmen to make cash sales rather than deferred payment sales is to offer them an additional one per cent commission.